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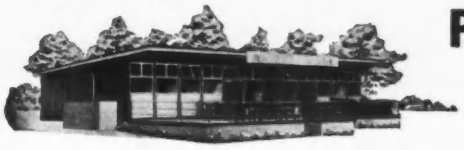

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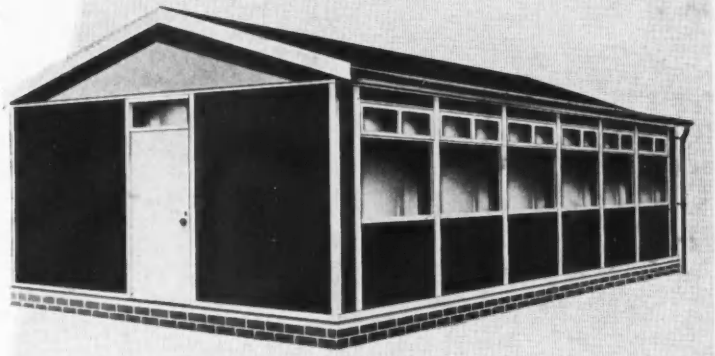

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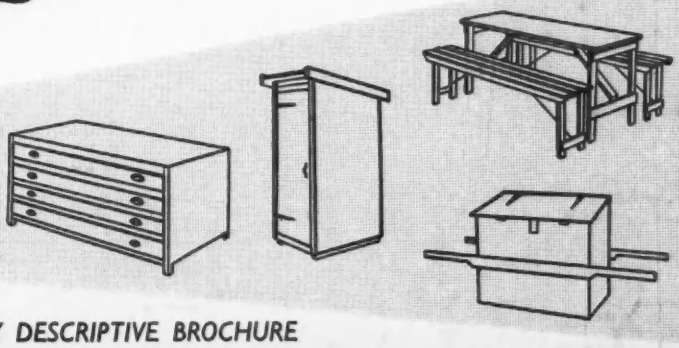

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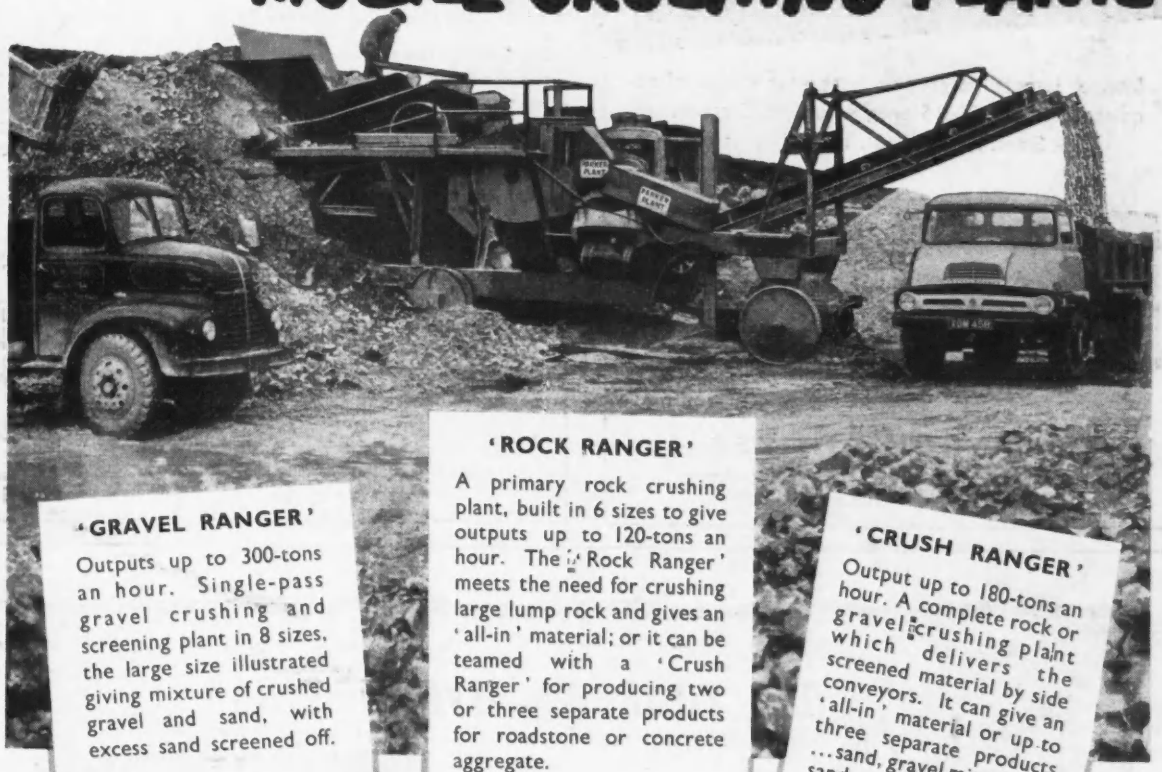

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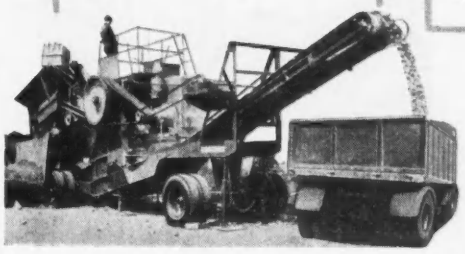

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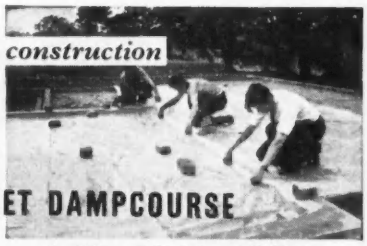

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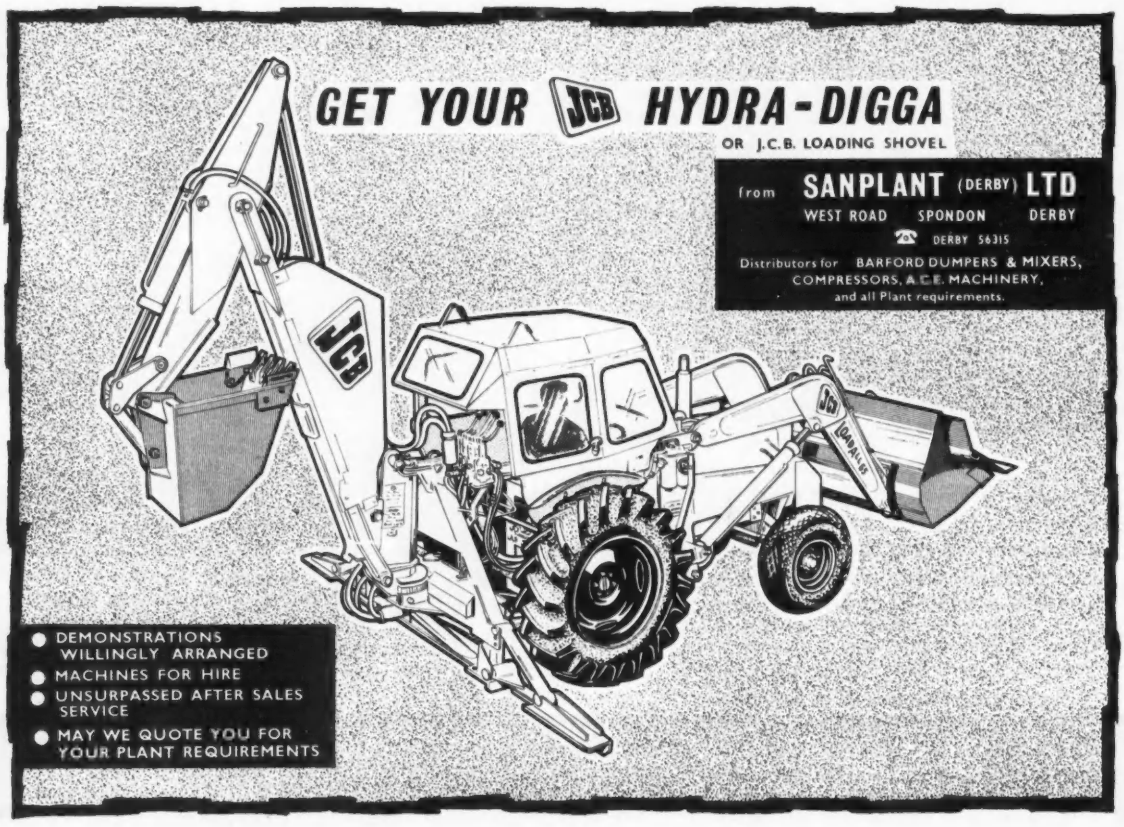

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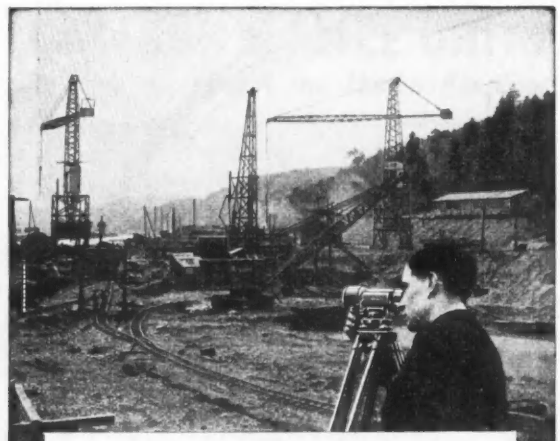

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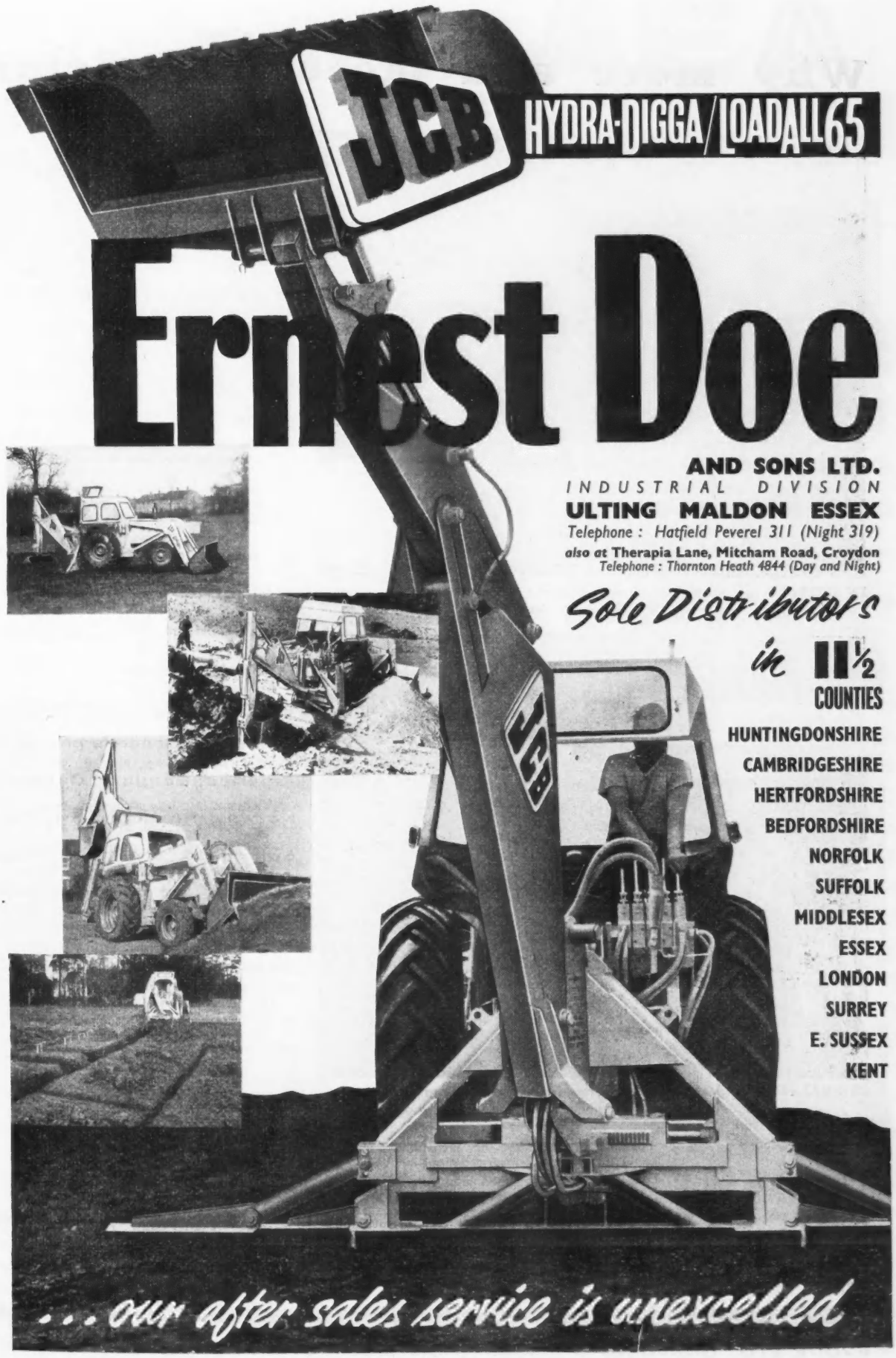
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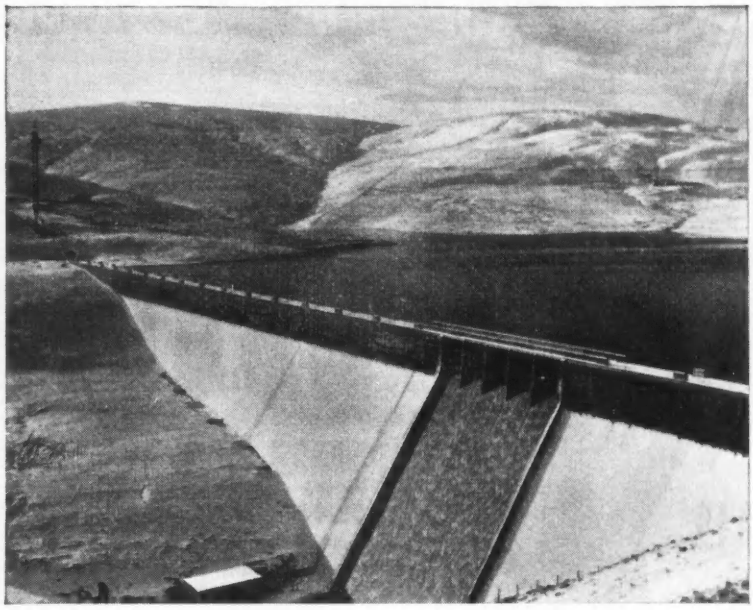

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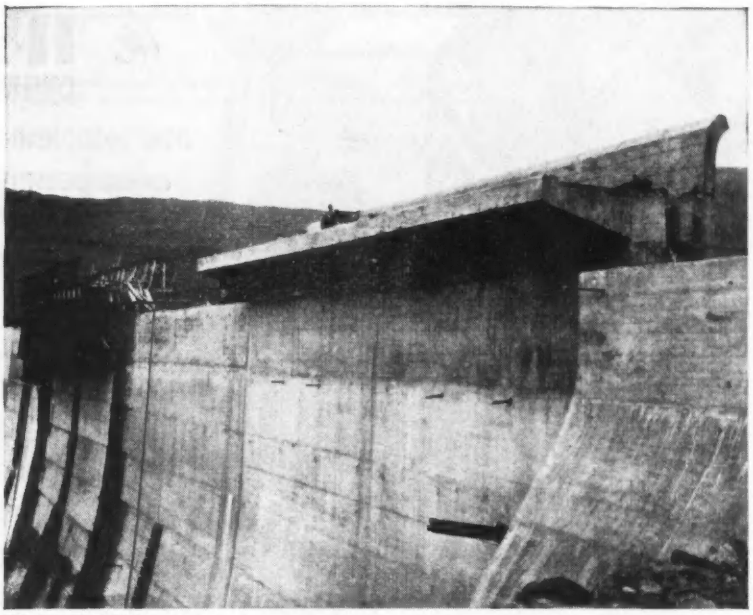

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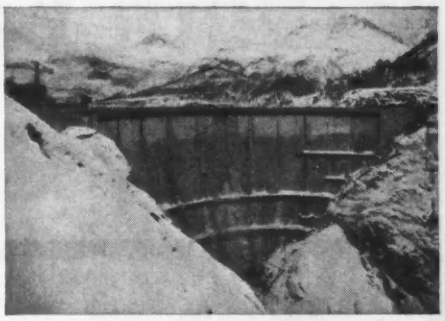
DAREX AEA is ideally suitable for ready mixed concrete, structural concrete, mass concrete construction, concrete road construction, repairs and patching and concrete products.



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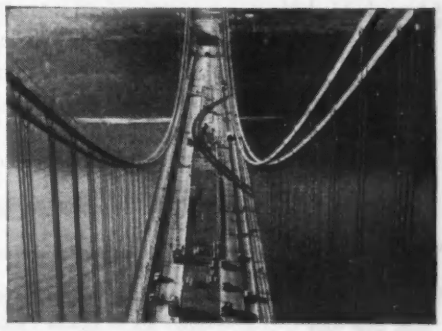

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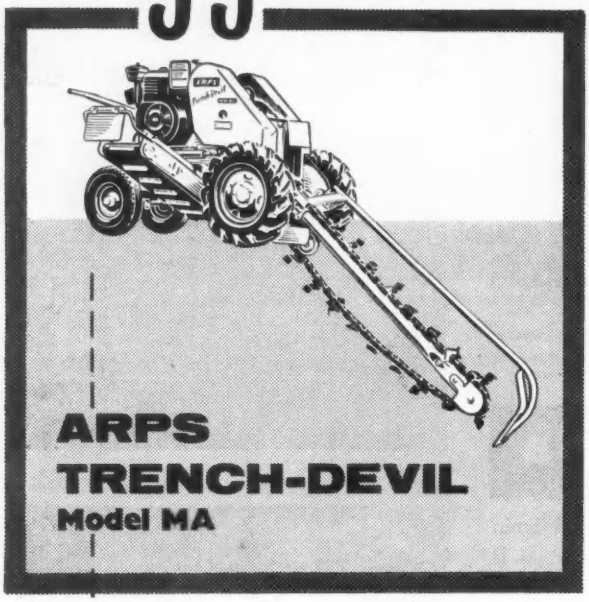

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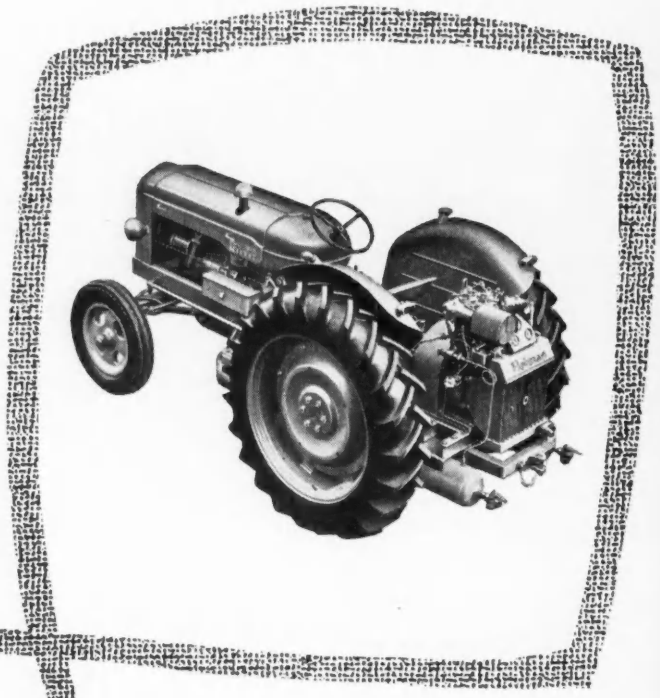

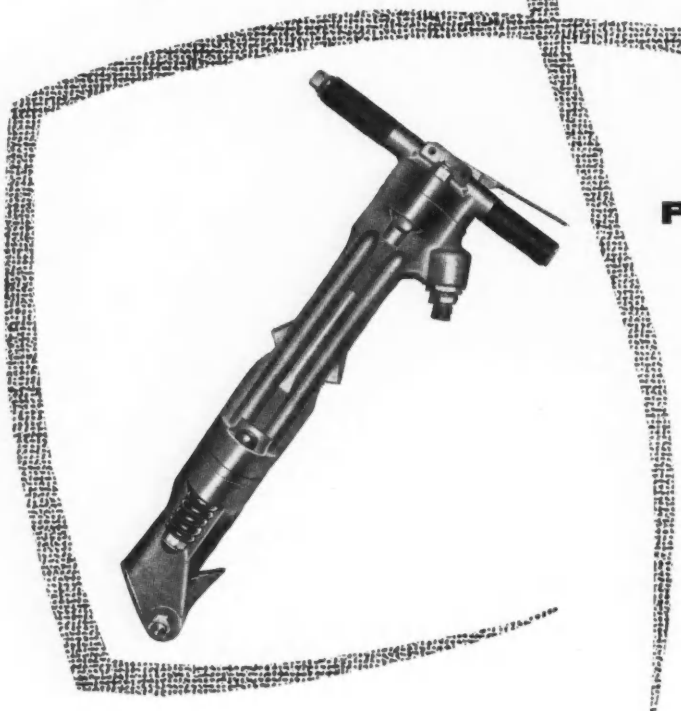

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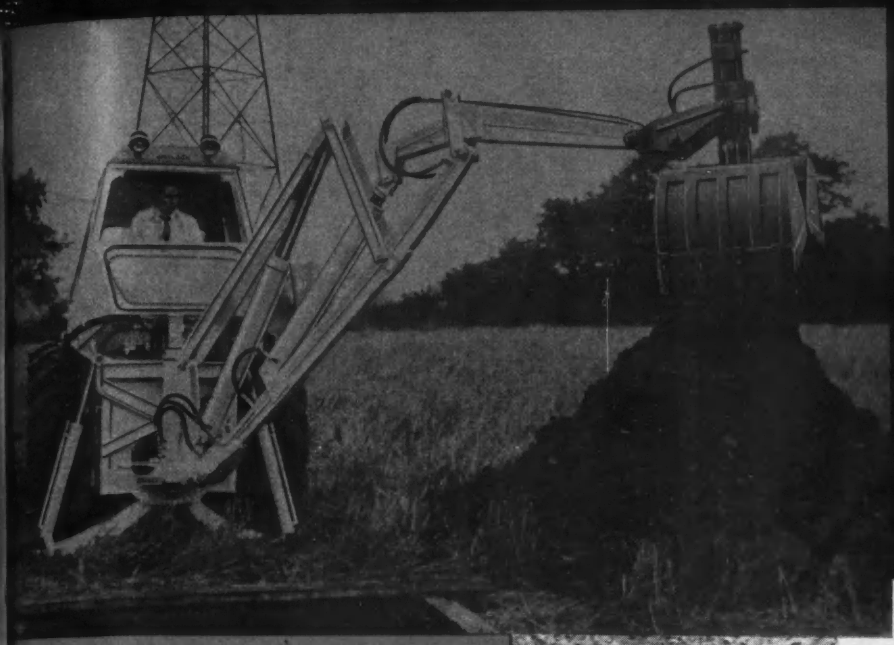

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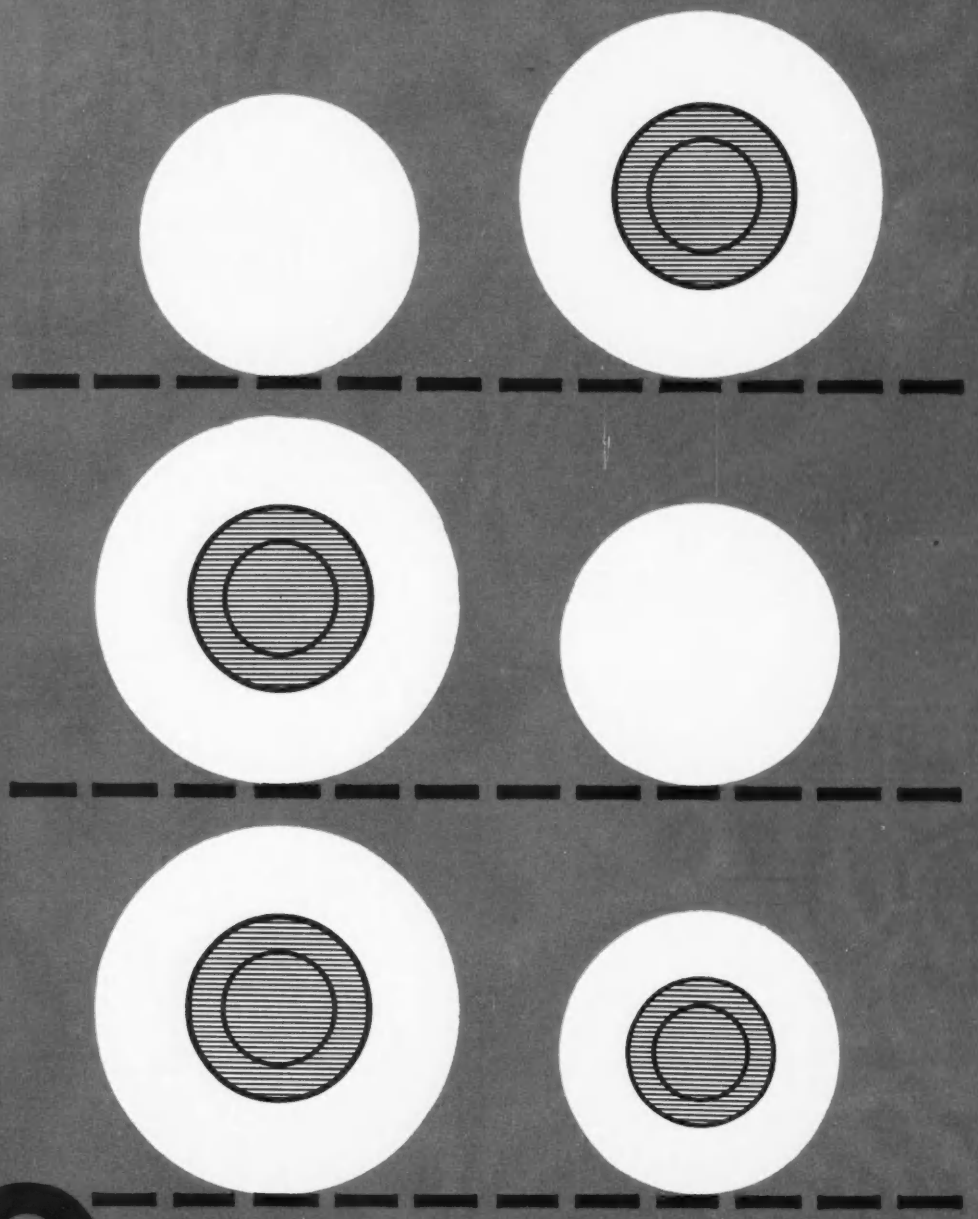

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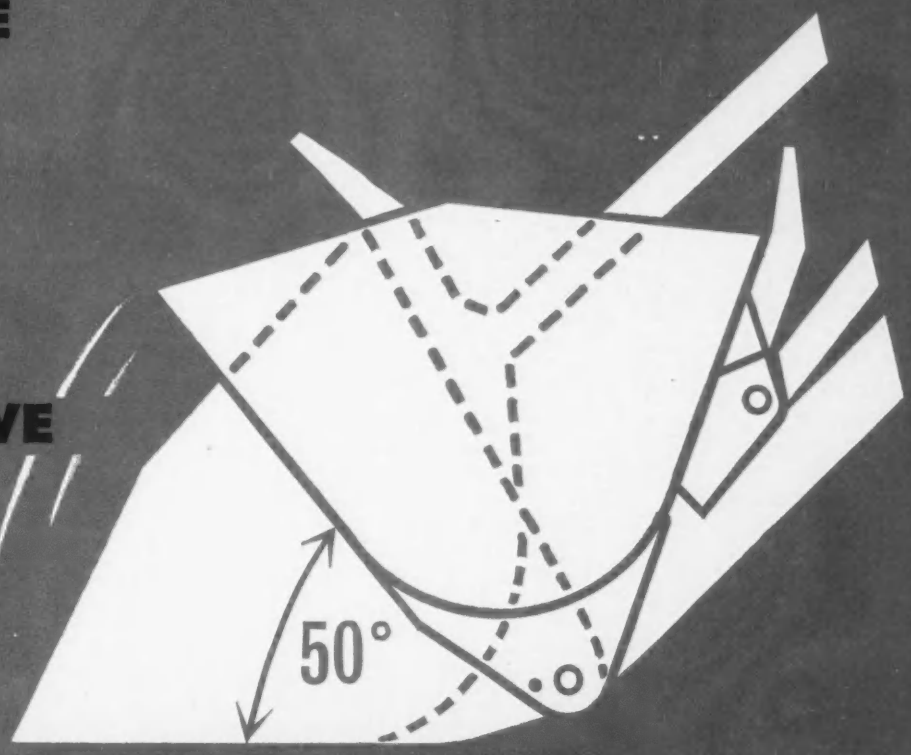

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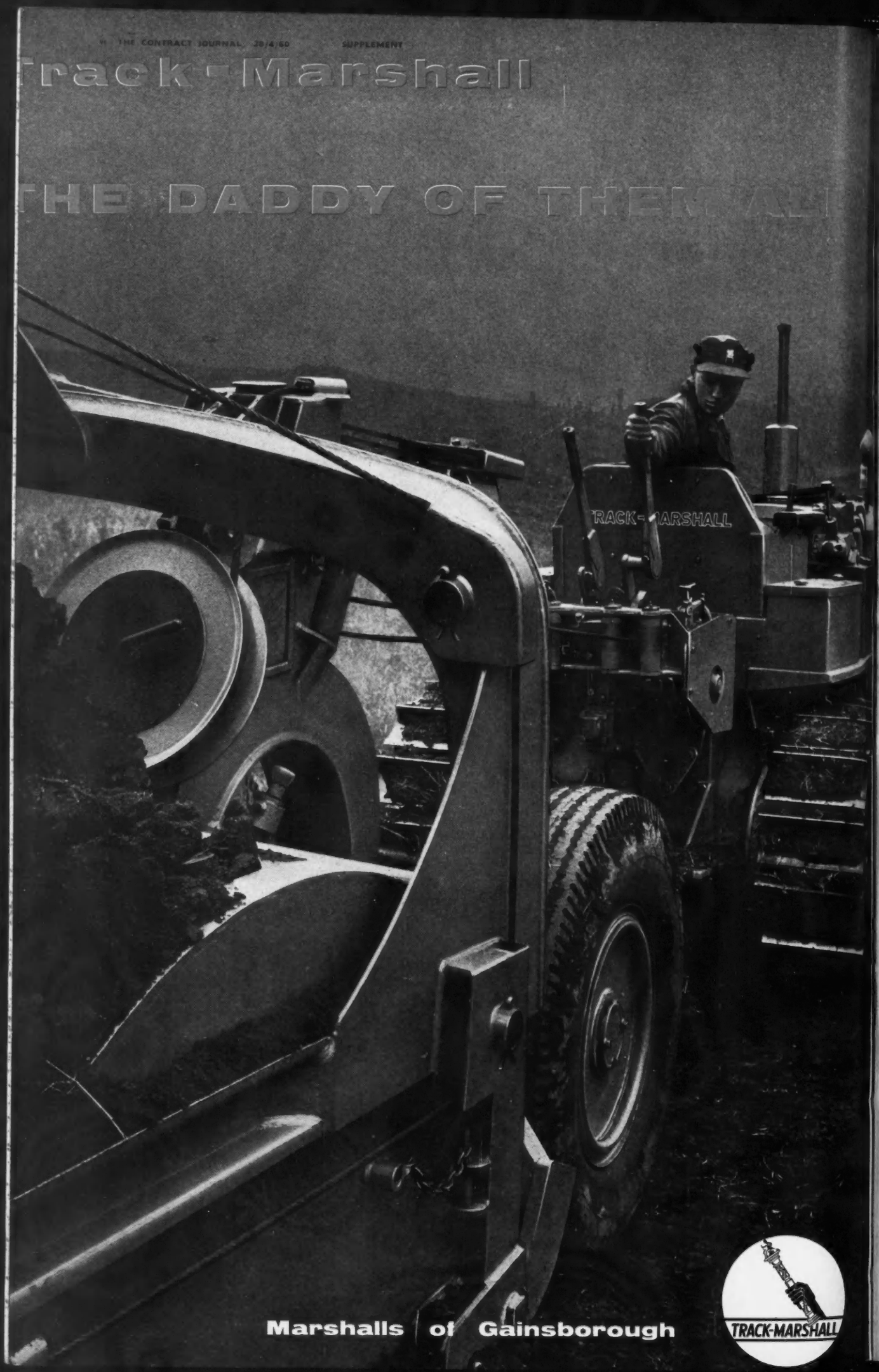

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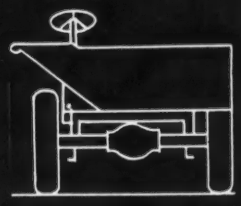
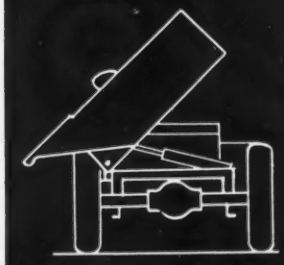
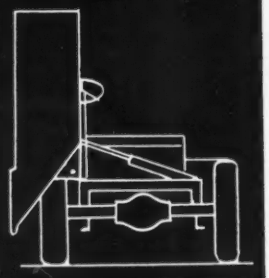


Low loading height of 48 in. with 27 cu. ft. water level skip ensures use on site with standard mixers.



Positive hydraulic finger-tip control ensured by double-action ram driven from Dowty hydraulic motor directly coupled to engine.



Discharge lip within view of driver at all times ensuring accurate placing of concrete whilst in motion complete tip of 90° obtainable if required within 7 seconds.

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Skip.	3/16″ thick sheet steel, electrically welded and braced where required. Capacity: 27 cu. ft. water level. Speed of lift: 7 seconds. Loading height: 4 ft. Maximum payload: 30 cwts.
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Engine.	Petter AVA2. 11.5 h.p. @ 1650 r.p.m. working off half speed shaft. Chain drive to clutch, slow running "Renold" ¾″ pitch.
Gearbox.	Constant mesh, 3 forward, 1 reverse, gears hardened nickel chrome steel with a ground finish to ensure smoothness in running.
Driving Axle.	4 star differential with half shafts of 100 ton steel. 12″ x 2½″ brakes.
Speeds:	1st gear: 4 m.p.h. 2nd gear: 7½ m.p.h. top gear: 12½ m.p.h. reverse: 4 m.p.h.
Pump.	4½ g.p.m. @ 1,500 r.p.m. Chain drive.
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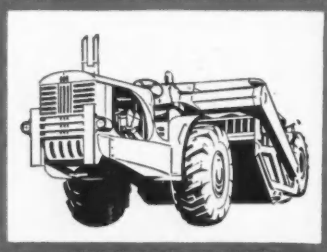

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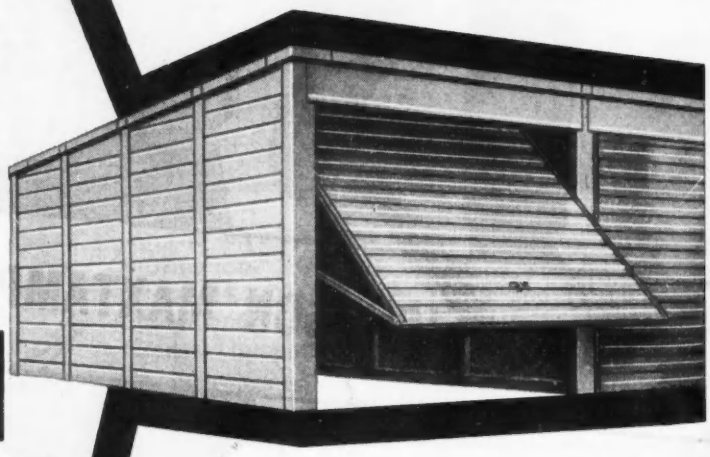

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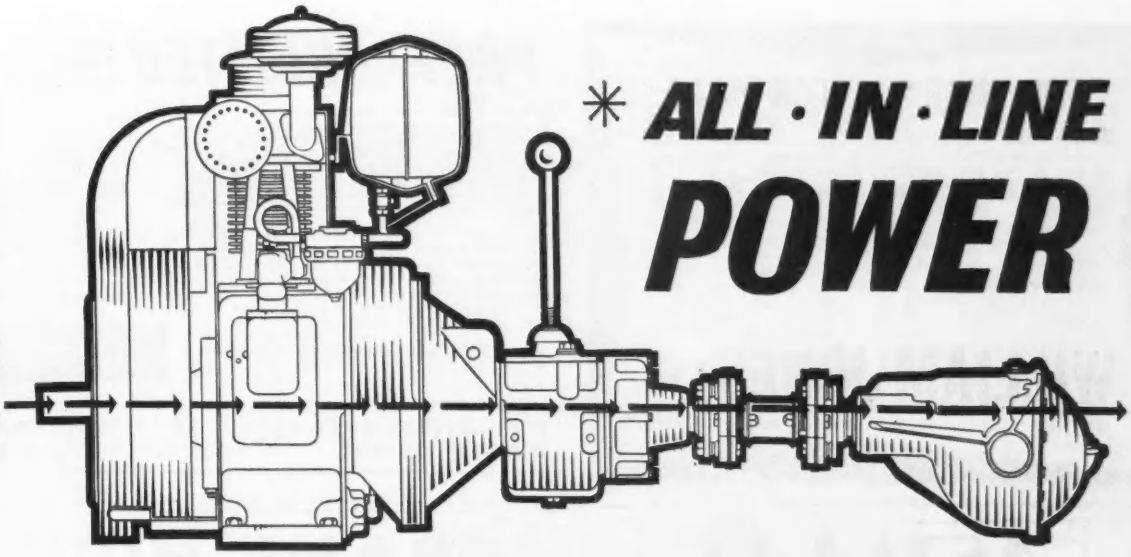

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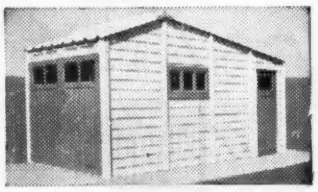

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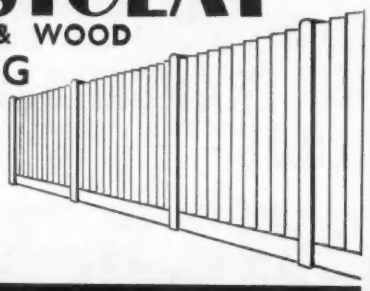

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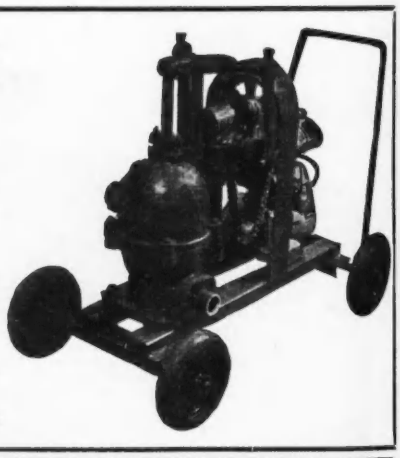

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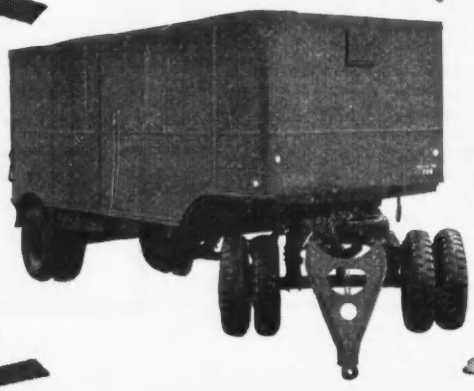

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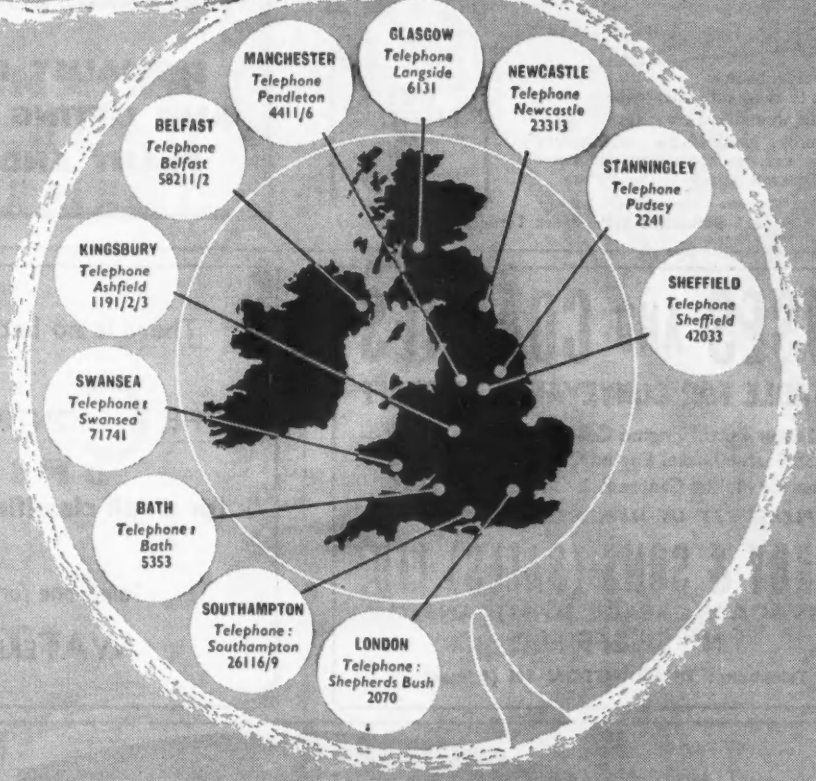

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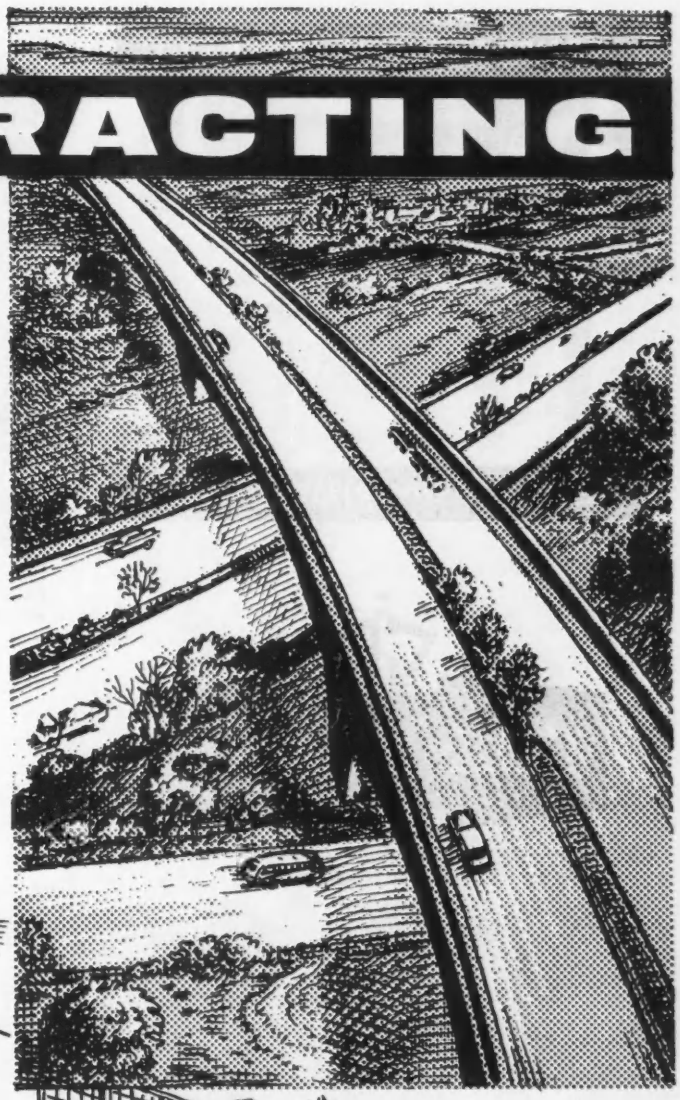

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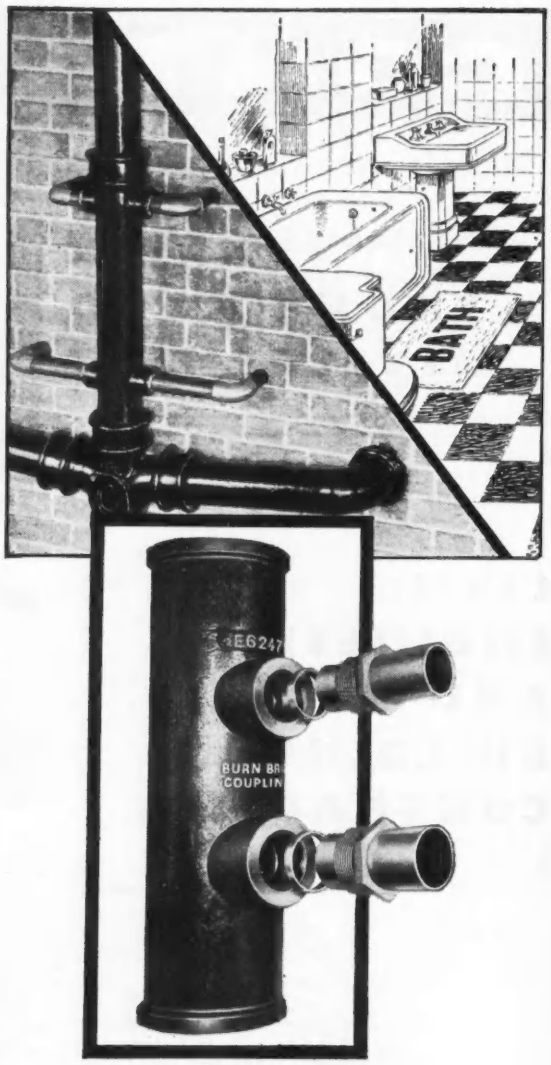

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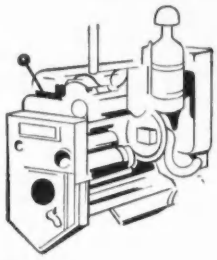

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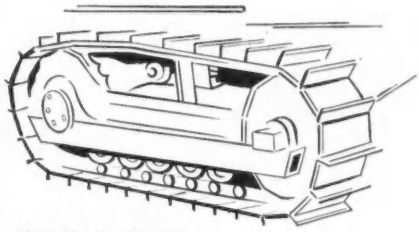

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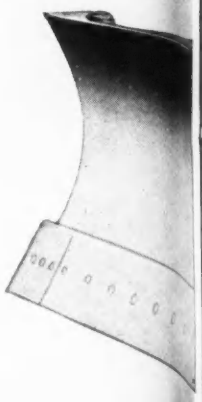

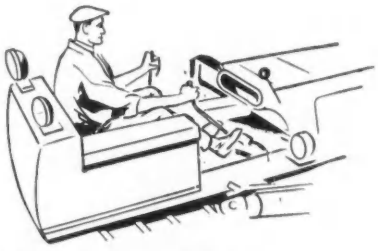

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NOW IN FULL PRODUCTION IN GREAT BRITAIN

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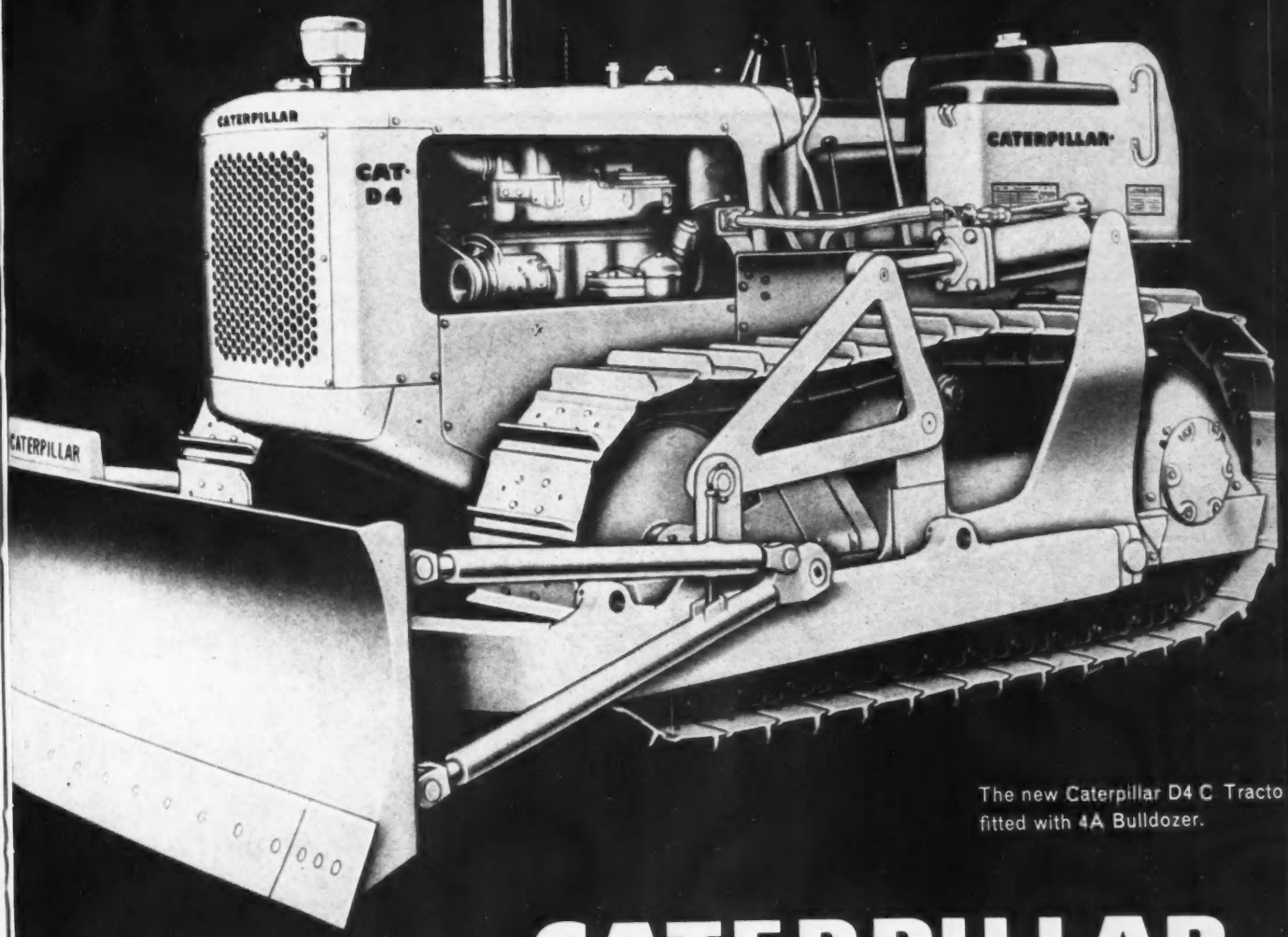
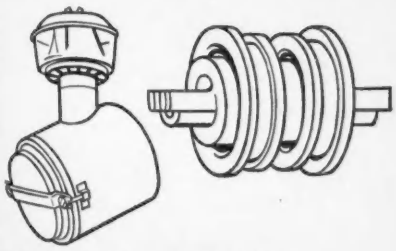


The new Caterpillar D4 C Tracto
fitted with 4A Bulldozer.



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THE TD 120 TRACTOR MOUNTED DUPLEX COMPRESSOR

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all the time" *says Eddie Peters, Plant Manager of Twentieth Century*

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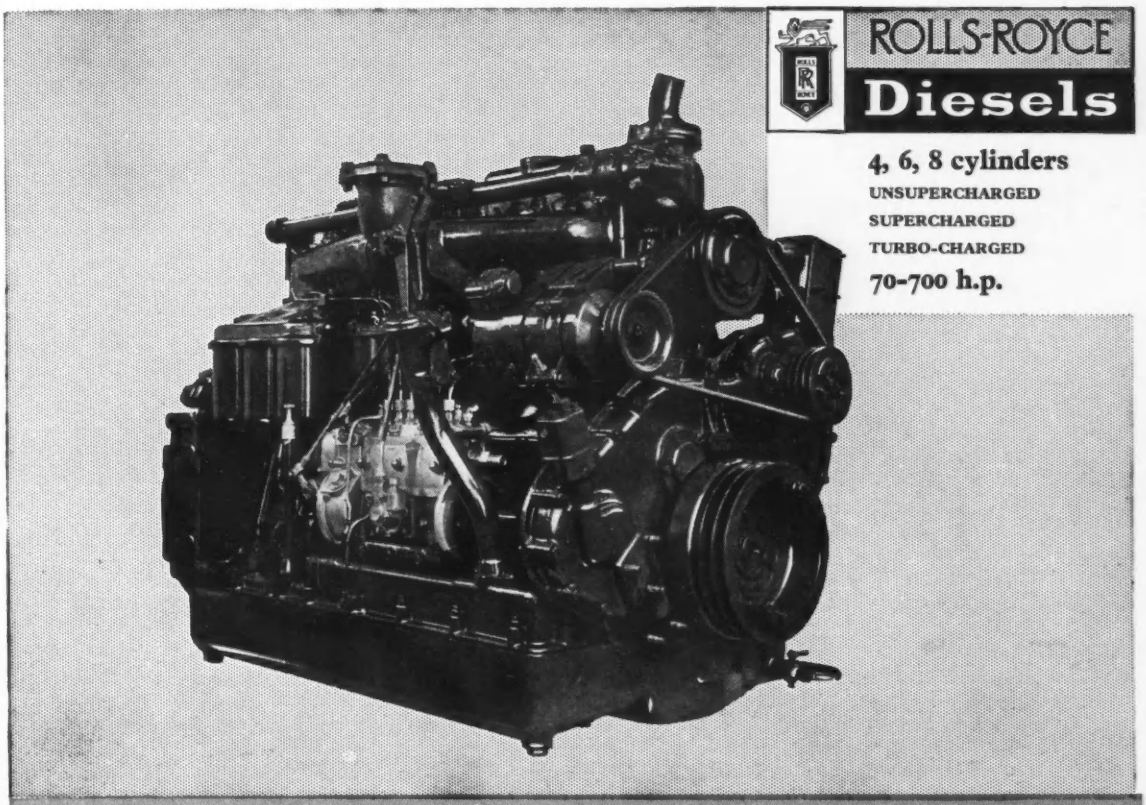

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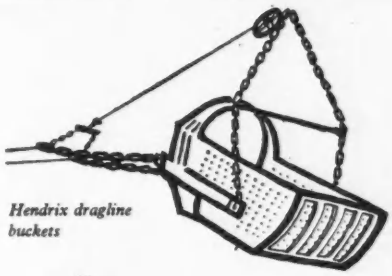
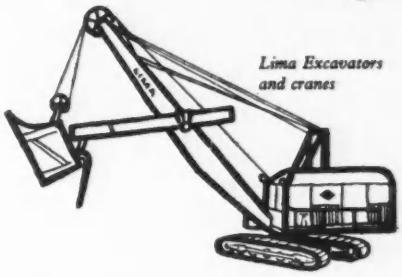


Hendrix dragline buckets



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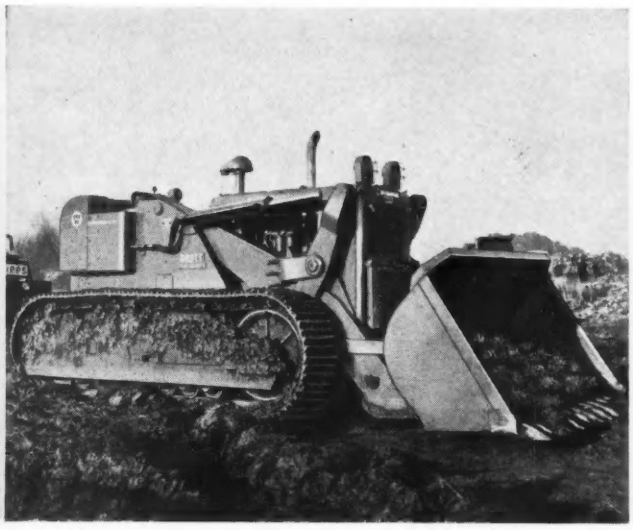

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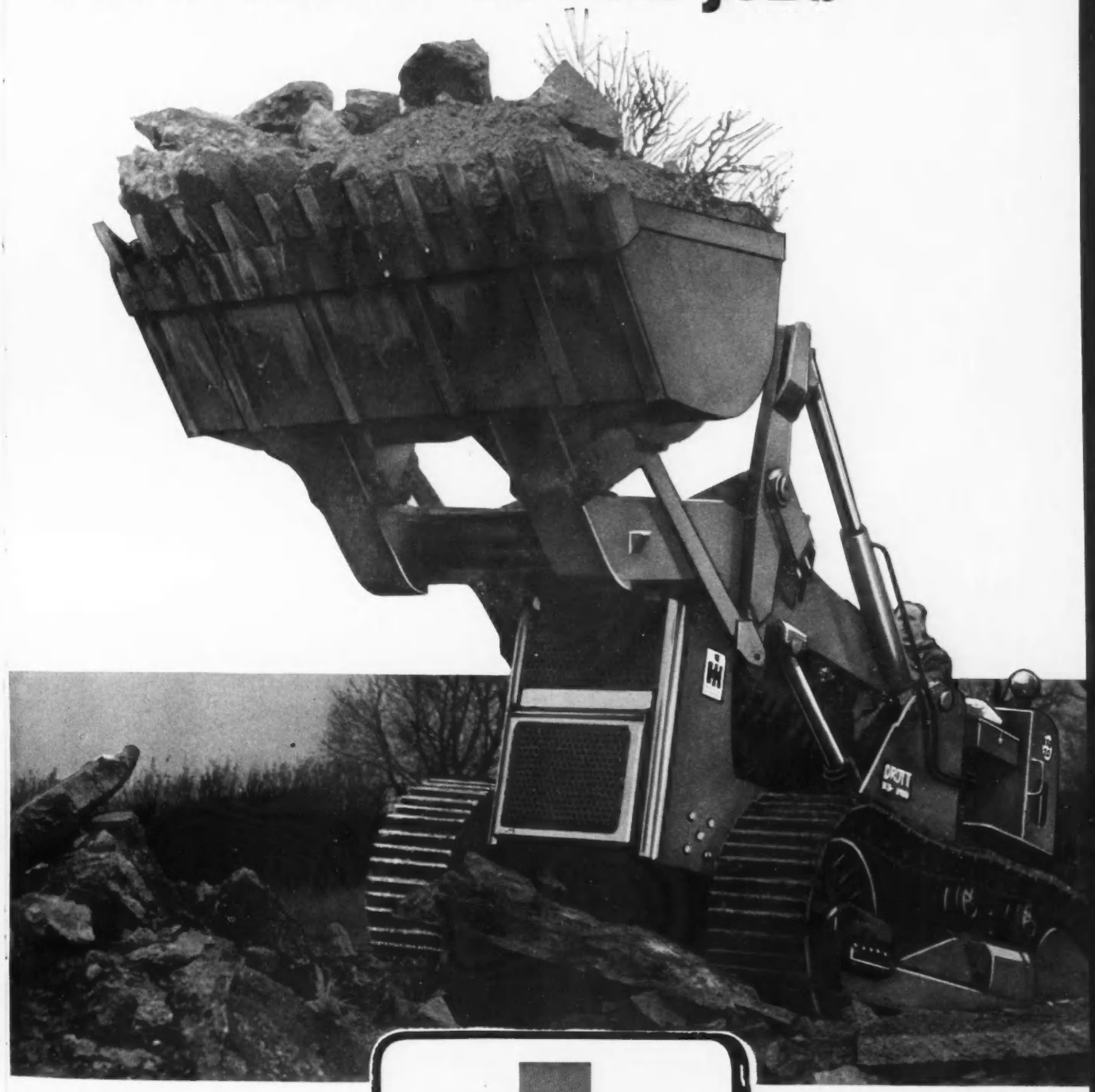

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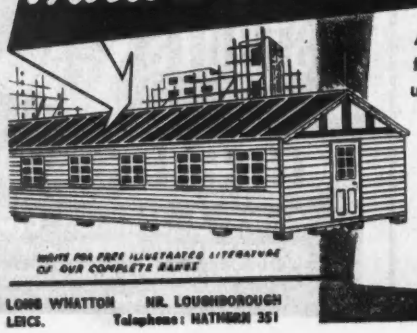

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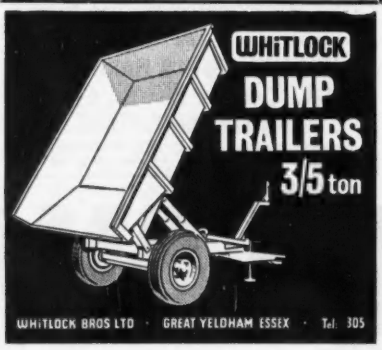

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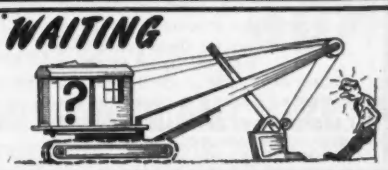

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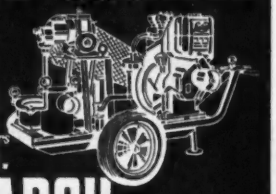

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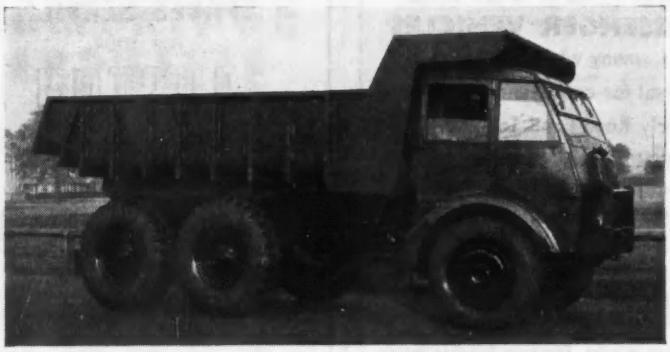

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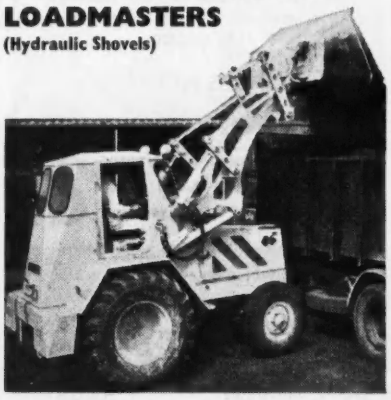

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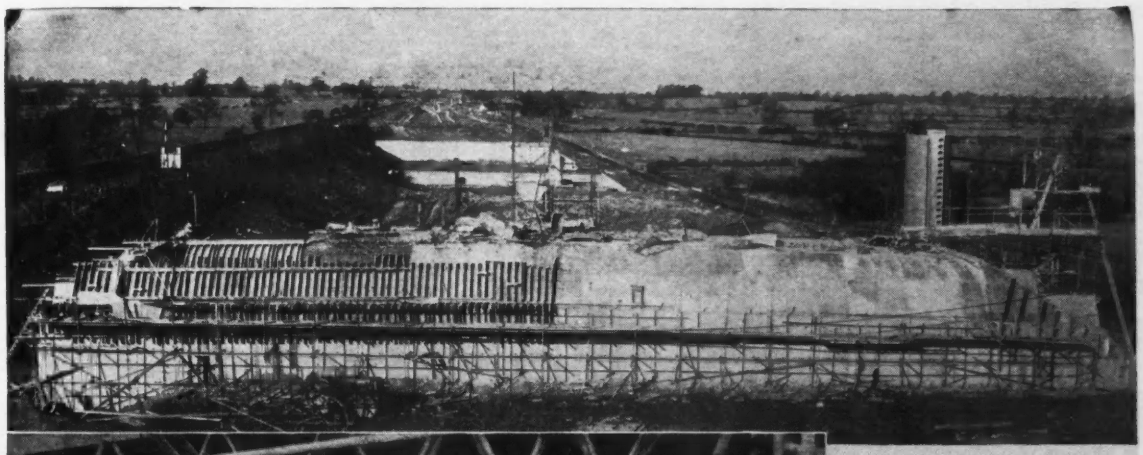

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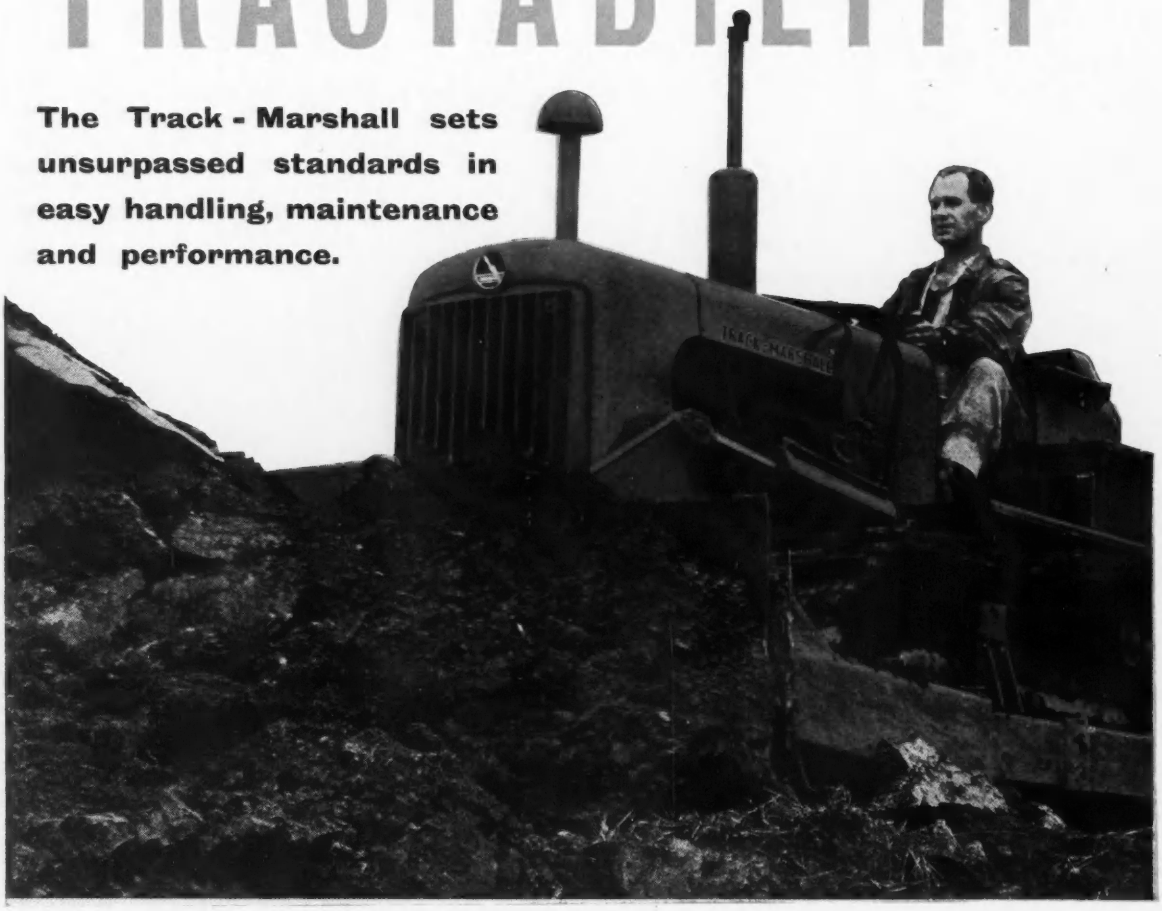

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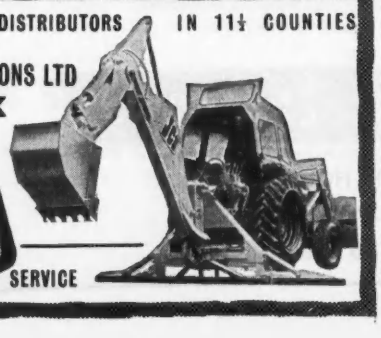

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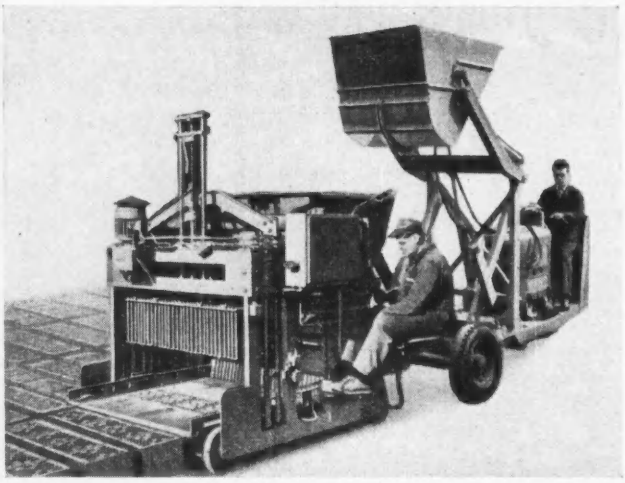

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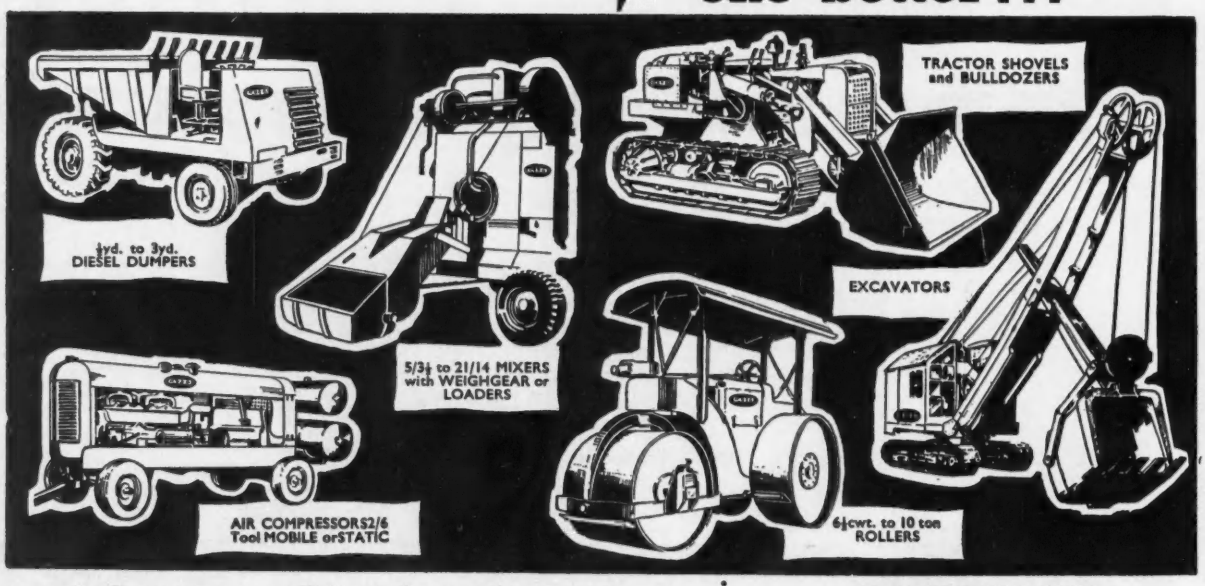

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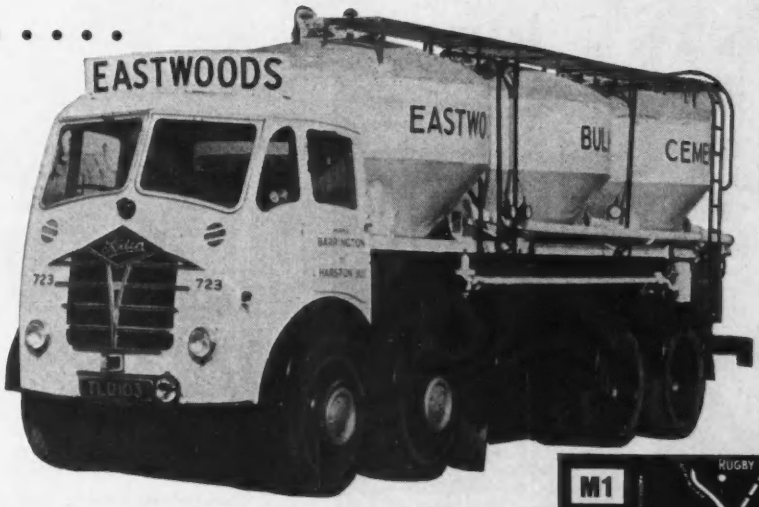

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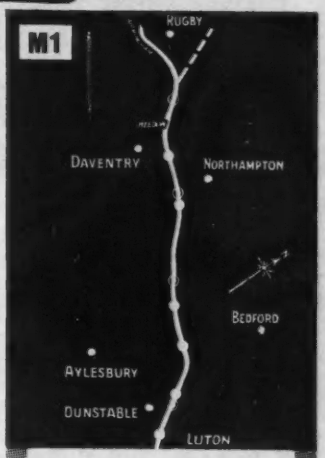

One of the main suppliers to the Motorway. Deliveries of Eastwoods Cement, in bulk, have contributed to the rapid completion of the new London to Birmingham trunk road.

EASTWOODS SALES LIMITED

Head Office: Eastwood House, 158-160 City Road, London, E.C.1. Telephone: CLErkenwell 2040 (30 lines)

Northern Area Sales Office: 39 Thorne Road, Doncaster
Telephone: Doncaster 49256/7

Lewes Cement Sales Office: Southerham, Lewes, Sussex
Telephone: Lewes 500/1

Depots at: **CAMBRIDGE**, 117 East Road, Tel: Cambridge 2087/55514; **COVENTRY**, Sandy Lane, Tel: Coventry 61707/40058; **DONCASTER**, Crompton Road, Tel: Doncaster 61442; **EASTLEIGH**, Allbrook, Eastleigh, Hants, Tel: Eastleigh 2621/2; **GILLINGHAM** (Kent), Trafalgar Street, Tel: Gillingham 51088/9; **GREENWICH**, Norman Road, S.E.10, Tel: GREenwich 1172/3; **HILLINGDON**, Uxbridge Road, Tel: Uxbridge 6421/2; **IPSWICH**, Cumberland Street, Tel: Ipswich 53794/5; **ISLEWORTH**, 11 The Square, Tel: Isleworth 2271/2; **KINGSLAND**, 4 Orsman Road, N.1, Tel: SHOreditch 4133/4; **KING'S LYNN**, South Everard Street, Tel: King's Lynn, 3718; **LEEDS** 7, 320 Meanwood Road, Tel: Leeds 40484; **LETCHWORTH**, Birds Hill, Tel: Letchworth 1700; **MORTLAKE**, High Street, S.W.14, Tel: PROspect 7231/2/3; **NORWICH**, Rosary Road, Tel: Norwich 21498; **SOUTHEND-ON-SEA**, Fairfax Drive, Southend, Essex, Tel: Southend 48171/2; **SUDBURY** (Suffolk), North Street, Tel: Sudbury 2895/6; **WEMBLEY**, St. John's Road, Tel: WEMbley 5404/5; **WEYBRIDGE**, Bridge Wharf, Tel: Weybridge 3963.

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Any type of Handle Supplied.

★ Made from the best materials available and manufactured by Black Country Craftsmen.

Catalogue and Prices on request.

THE PHOENIX SHOVEL Co. Ltd.
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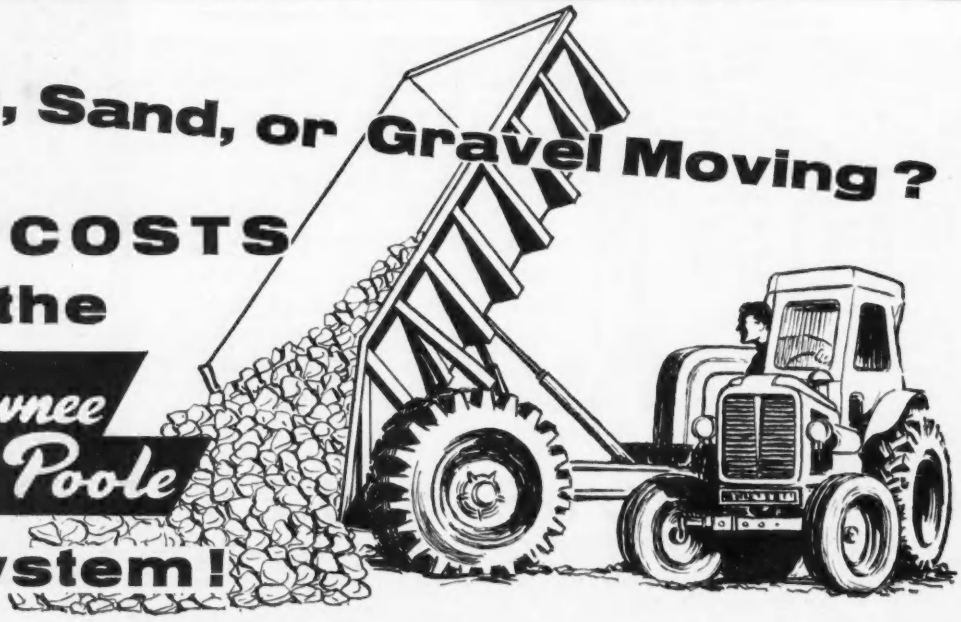
Earth, Sand, or Gravel Moving?

CUT COSTS with the Shawnee Poole system!



Cut first costs, fuel costs, and maintenance costs by making 50 h.p. do the work of 100. Save valuable man-hours by speeding turn-round and allowing straight-line hauls across rough country.

IT'S THE COUPLING THAT DOES IT!

Transfers towed weight to driving wheels, increasing adhesion and hauling power without front wheel lift or rear axle strain.
Its three-dimensional articulation copes with both 110° turns and the roughest terrain.

For further information contact:
161 GOWER ROAD
SWANSEA Tel: 22438

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LIMITED (TRACTOR DIVISION)
MAIN FORDSON DEALERS

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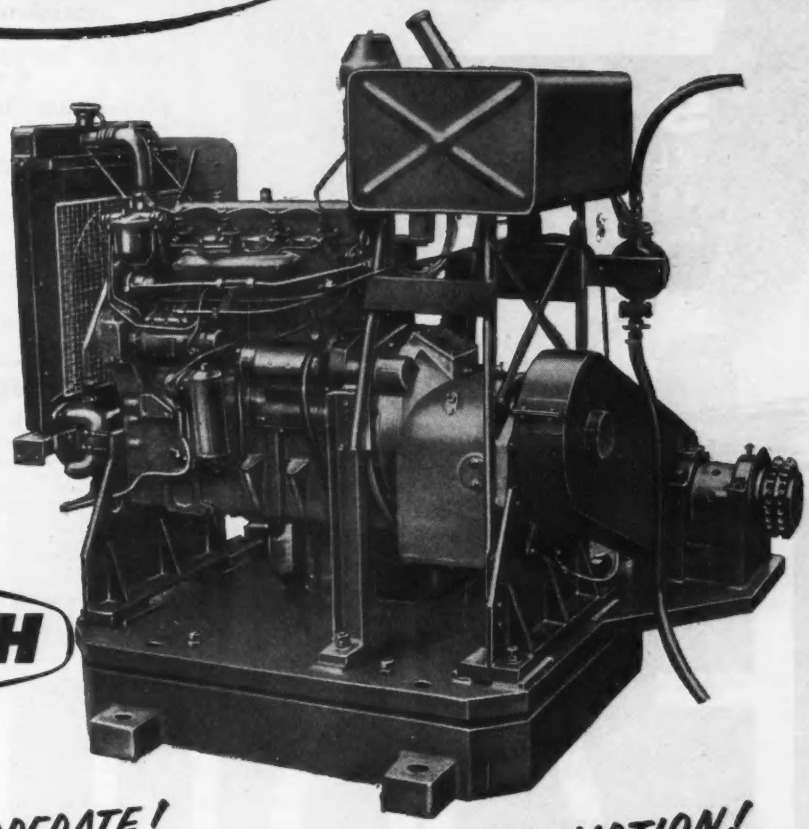
A DIESEL CONVERSION UNIT

FOR SMITH STEAM CRANES

Many owners of steam-powered cranes have become interested in diesel conversion for two major reasons: (a) the increasing cost of using solid fuel, and (b) implementation of the Clean Air Act 1956. Thomas Smith & Sons (Rodley) Ltd. have now produced a DIESEL DRIVEN CONVERSION UNIT suitable for Smith Steam Cranes up to 7 tons capacity, and adaptable for fitting to the many types of steam cranes now in existence. This Unit is, in effect, a Diesel Power Pack which is a self-contained unit replacing the boiler and other fittings at the rear of the crane.



SMITH

SIMPLE TO FIT!

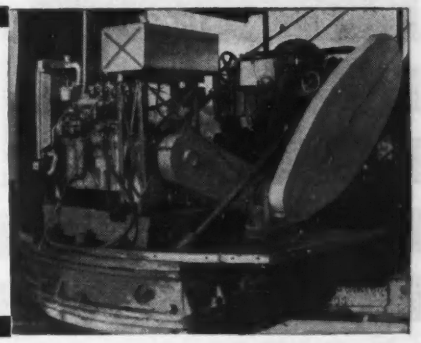
EASY TO OPERATE!

ECONOMICAL in FUEL CONSUMPTION!

The entire unit is designed to keep conversion work on the site to a minimum. To those interested in this method of diesel conversion, our Sales Department will be pleased to give more precise details—when inquiring for this equipment please state the serial number of the crane.

THOMAS SMITH & SONS (RODLEY) LTD · RODLEY · LEEDS

Telephone: Pudsey 2844. Wires: Smith Rodley Telex. (Telex No. 55105)



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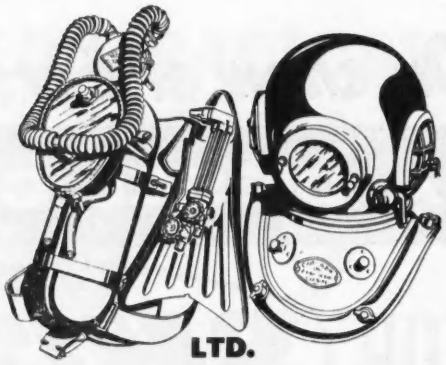
DIVING SPECIALISTS LTD.



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UNDERWATER AND MARINE CONSULTANTS

Design, Survey, Pile Driving, Cementing and Grouting underwater.

Underwater Cutting, Welding, Explosive work, Craft available.

DIVERS, FROGMEN AND PLANT HIRED IF PREFERRED

Rates from £7 7s. per day.

Immediate and efficient teams available anywhere in the world.

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LIMAS 1201 DRAGLINE WITH FACE SHOVEL EQUIPMENT
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W. J. SIMMS, SONS & COOKE LTD., EXCAVATION DEPT., HAYDN ROAD, NOTTINGHAM
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ON the M1, on the new Rosspur motorway, on roadworks at St. Alban's—wherever Britain's road systems are being developed—a vast amount of Petter powered equipment is used, including excavators, pumps, cranes, dumpers and concrete mixers. An example is this giant mixer engaged on the Rosspur project. A Petter twin cylinder air-cooled diesel supplies the main power, while a Petter PH1, a single cylinder unit of 8.2 b.h.p., loads cement from the hopper. Everywhere equipment manufacturers and the users rely upon the efficiency, economy and life-long reliability of PETTER individually tested engines, and the world-wide spares and maintenance service which backs them.

**Prospective power users are invited to ask our Technical Department for advice*

it goes much better powered by **PETTER**

SUPPLIED IN A RANGE FROM 1½–108 b.h.p.
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in every major road construction

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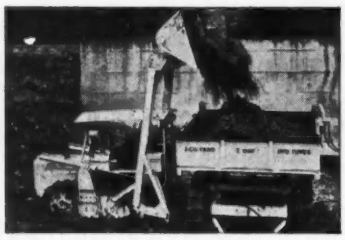

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EXCAVATING · SITE CLEARANCE · ROAD CONSTRUCTION

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FIRST CLASS SPARES AND SERVICE ORGANISATION

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By hiring contractors' equipment from Sykes, you have at your command a far wider range of plant than you could possibly maintain. Thus you are able to take on bigger contracts without locking up capital in new and expensive machinery.

Sykes supply on hire:

PUMPS of all types and sizes, including the famous Univac self-priming unchokeable centrifugal pumps in sizes from 2″ to 12″.

PILE DRIVERS from 20 ft–90 ft high, using monkeys up to 6 tons.

WINCHES in types with single barrel, double equal barrel, and double barrel with high and low speed barrels. For dealing with weights up to 12 tons on single rope.

DEWATERING PLANT using the efficient Jetwell equipment, suitable for operation by your own personnel after brief instructions.

LIFTING TACKLE & JACKS Hand Crabs, Pulley Blocks and wire ropes for loads up to 40 tons, Chain Blocks for loads up to 10 tons and Jacks of all types for loads up to 300 tons.

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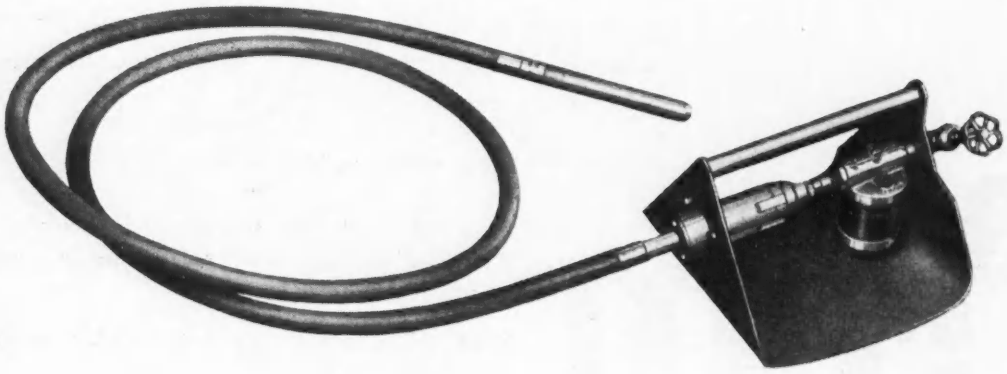
Telephone: HOP 5231 (8 lines) Telegrams: Tripulse, Sedist, London

COMPACTORS ENGINEERING LTD.

LOCKFIELD AVENUE, BRIMSDOWN, ENFIELD, MIDDX. TELEPHONE: HOWARD 4063-5



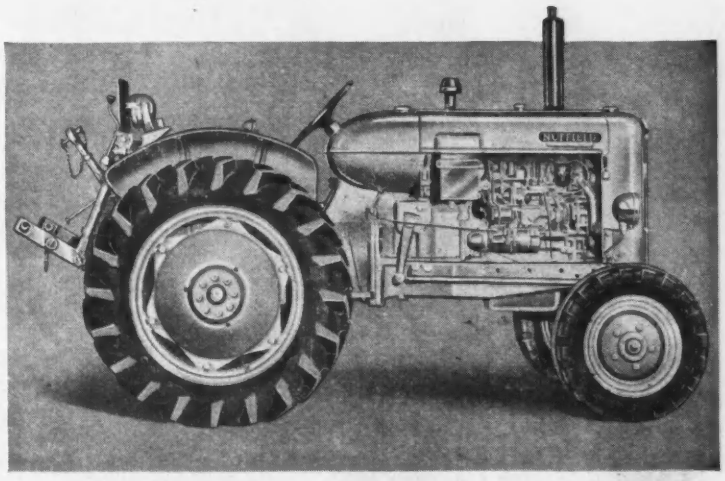
The Model AF.20 Pneumatic Internal Vibrator (as illustrated) is the most versatile of all air Vibrators. It can be supplied with five sizes of vibrator heads ranging from 1" dia. to 2⅛" dia. and flexible drives up to 24' long. By changing the heads the same Vibrator can be used for practically all concreting jobs on a site: for foundations, walls, columns, beams and floors. The AF.20 Vibrator is light in weight and economical in use. Owing to its high frequency of 12,000 r.p.m. it can consolidate the driest of concrete mixes, and the direct exhaust prevents "freezing" of the Vibrator even under the most arduous conditions.

COMPACTORS ENGINEERING LTD.

LOCKFIELD AVENUE, BRIMSDOWN, ENFIELD, MIDDX. TELEPHONE: HOWARD 4063-5

CHEAP TO RUN, EASY TO HANDLE WITH POWER IN PLENTY

The sturdy, compact Nuffield Three combines versatility with low operating costs and is ideal for industrial work. Five forward gear ratios give speeds from ½ m.p.h. for site work to 14 m.p.h. for pace on the road.
Ample power is provided by the 2.55 litre B.M.C. diesel engine. (It develops 37 b.h.p. and is renowned for economical and reliable running). Designed to appeal to drivers, the 'Three' is low-built for stability and the deep seat, handy controls, shields and non-slip surfaces ensure comfort and safety.
Remarkably versatile, this energetic tractor takes front-, mid- and rear-mounted equipment. Put a 'Three' to work and tackle more jobs than ever before.



- **Vacuum Brakes** Clayton Dewandre vacuum braking equipment is now available for use with heavy trailers.
- **Independent Wheel Brakes** A completely independent braking system may be fitted in addition to the standard differential-type brakes.
- Optional extras on "Three" and "Four" models.

TWELVE MONTHS' WARRANTY
and backed by B.M.C. Service—
the most comprehensive
in Europe

NUFFIELD UNIVERSAL THREE

BMC

MORRIS MOTORS LTD. (AGRICULTURAL DIVISION), COWLEY, OXFORD

Overseas Business: Nuffield Exports Ltd., Oxford and 41-46 Piccadilly, London, W.1

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BRITAIN SWINGS TO CASE

TERRAMATIC DRIVE

The internationally unrivalled Case range of earthmoving equipment with built-in Terramatic Drive is here to raise your output by up to 50%. Watch this journal for further announcements.

J. I. CASE COMPANY LTD
MILL ROAD, WEST DRAYTON, MIDDLESEX

Telephone: West Drayton, 3221/3

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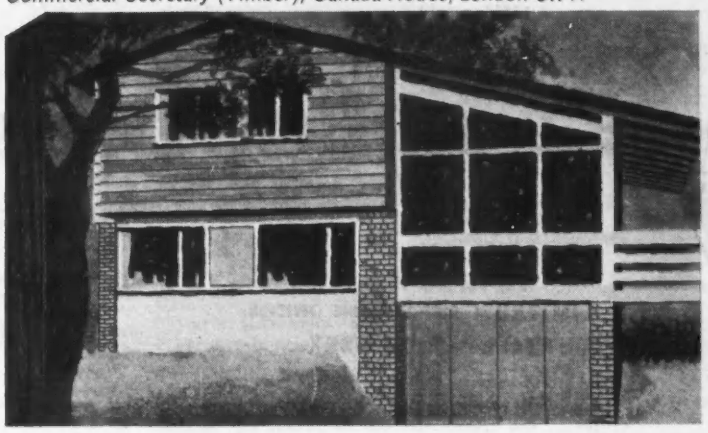
CANADIAN TIMBER

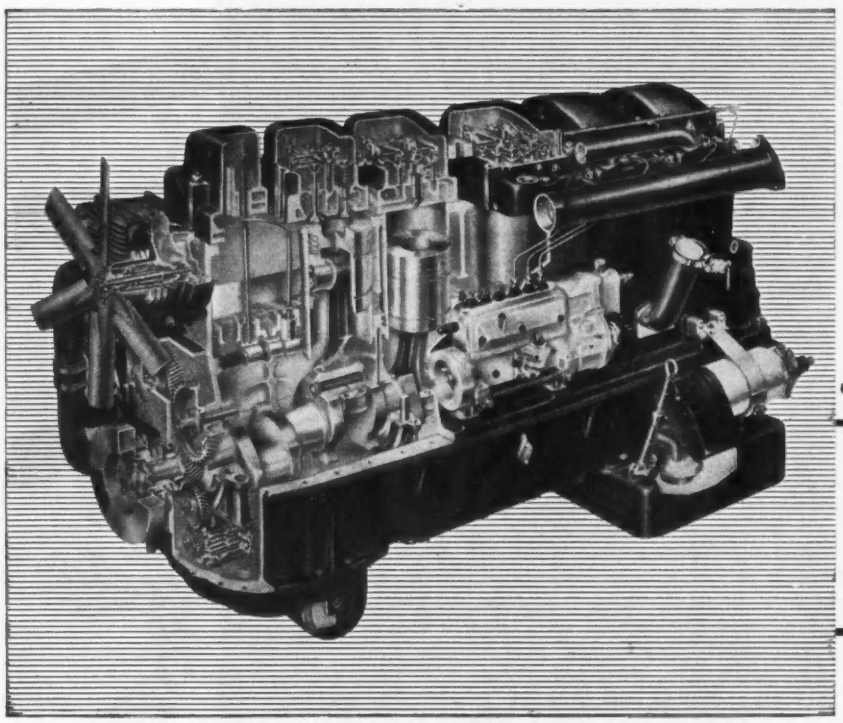
Western red cedar

With a tree of great age (1,200 years is not unusual) a timber of enormous resilience may be taken for granted. Yet Western Red Cedar is also the lightest of all commercial softwoods and is unsurpassed in its easy workability. Free from pitch or resin, highly resistant to decay, acids and alkalies, handsome both in texture and colour—few timbers combine so many rare qualities, or provide a better material for so many different uses. Roof decking, exterior cladding, interior panelling, door and window framing, are just some examples. *For further information contact the Commercial Secretary (Timber), Canada House, London SW1.*

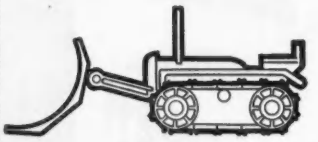


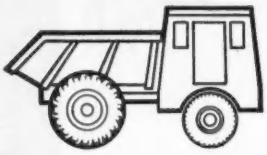
The Canada Tree House at the 1960 Ideal Home Exhibition

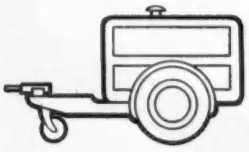
Where you need POWER



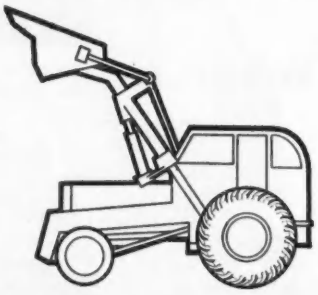
Largest of the A.E.C. Industrial diesels is the AV1100G giving 275 b.h.p. or, turbo-charged, 360 b.h.p.







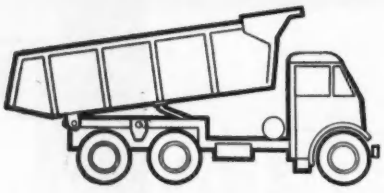
For earth moving equipment of every type there's now an A.E.C. diesel that's just right for the job. Normally aspirated, Southall-built industrial engines range from 50-275 b.h.p.: turbo-charged they go up to 360 b.h.p. and provide the most compact economical units it's possible to buy. They're designed to give high torque and sustained or intermittent rugged power wherever and whenever it's needed . . . for unfailing reliability in the severest conditions . . . for long trouble-free working life. And wherever they are operated they are backed by A.C.V.'s world wide service facilities. That's why when it's a question of power, the answer is . . . A.E.C.



You need A.E.C. DIESELS

AEC

A.E.C. LIMITED · DIESEL ENGINE DIVISION
SOUTHALL · MIDDLESEX



MI/495

CONTRACTS

COUNTY BOROUGH OF DONCASTER.

CONTRACT NO. 59A.

SANDALL SEWAGE WORKS PRETREATMENT.

TENDERS are invited from experienced civil engineering contractors for the CONSTRUCTION of the FOLLOWING:—

(1) Various Elevated Reinforced Concrete Liquid Retaining Structures for Screening, Grit Removal and Storm Overflow Weir.
(2) Three Rectangular Reinforced Concrete Storm Water Settling Tanks, each approx. 120ft. x 40ft. x 8ft. deep.
(3) Roadworks, Sewers, Pipework and ancillary Building Works.

The Specification, Bill of Quantities, Form of Tender and Preliminary Drawings may be obtained from the Borough Surveyor, 2 Priory Place, Doncaster, on payment of a deposit of £3 3s., returnable on receipt of a bona-fide Tender and returnable documents.

The General Conditions of Contract and other Detailed Drawings may be seen at the Office of the Borough Surveyor during office hours.

Tenders, in envelopes provided, must reach the undersigned not later than 12 Noon, SATURDAY, 4th June, 1960.

The Corporation do not bind themselves to accept the lowest or any Tender.

H. R. WORMALD,
Town Clerk.

1 Priory Place,
Doncaster.

BOROUGH OF PUDSEY.

FENCING—PUDSEY PARK.

TENDERS are invited for the SUPPLY and ERECTION of approx. 265 lin. yd. of 4ft. high W.I. VERTICAL BAR FENCING and THREE SEMI-ORNAMENTAL W.I. GATES, to be Erected on Existing Dwarf Walls Surrounding the Children's Recreation Ground.

Plan, Form of Tender, Specifications and full particulars of the types of fencing and gates required, can be obtained from the Borough Surveyor, Town Hall, Pudsey.

Tenders must be submitted in plain sealed envelopes marked "Tender—Fencing—Pudsey Park," shall bear no name or mark indicating the sender, and must be delivered to the undersigned not later than 9 a.m. on SATURDAY, 14th May, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

W. RICHARD CRUSE,
Town Clerk.

Town Hall,
Pudsey.

BOROUGH OF REIGATE.

ONE BLOCK OF 16 FOUR-STOREY MAISONNETTES AND ONE BLOCK OF EIGHT FOUR-STOREY MAISONNETTES WITH STORES UNDER, AT THE DOME ESTATE, REDHILL.

FIXED-PRICE TENDERS invited, based upon Bills of Quantities, for SUBSTRUCTURE and SITE WORKS, and lump sum for SUPERSTRUCTURE. Form of Tender, Specification, Bills of Quantities and Plans obtainable from Borough Surveyor, Town Hall, Reigate, on payment of deposit of £2 2s. Closing date for receipt of Tenders, Noon, MAY 19th, 1960.

HEBER DAVIES,
Town Clerk.

Town Hall,
Reigate.

CITY OF STOKE-ON-TRENT.

STOKE CEMETERY—EXTENSION.

The CORPORATION invite TENDERS from civil engineering contractors for CARRYING OUT WORK REQUIRED in a 3½-acre EXTENSION of the ABOVE CEMETERY.

The work involves the Provision of Sub-drainage, Path Drainage, and Construction of Paths, etc.

Drawings may be inspected, and Contract documents obtained from the City Engineer and Surveyor, Town Hall, Stoke-on-Trent, on payment of £3, which will be returned if a bona-fide Tender is received.

The Tender and priced Bill of Quantities (in the separate envelopes provided) must be delivered to the undersigned by 12 Noon on MONDAY, 9th May, 1960.

HARRY TAYLOR,
Town Clerk.

CITY OF BRADFORD.

SEWAGE DEPARTMENT.

RECONSTRUCTION OF BIOLOGICAL FILTERS.

BED NO. 9—UNIT NO. 3.

TENDERS are invited for the WORK of RECONSTRUCTING about 1½ acres of BIOLOGICAL FILTERS at the Corporation's Esholt Sewage Works. The Contract will include the Laying of Aeration Tiles over the existing Concrete Floor and the Placing of about 13,000 cu. yd. of Graded Stone Filter Medium, together with Minor Constructional Works.

Conditions of Contract, Specification and Form of Tender may be obtained from the Sewage Works Engineer and Manager, Esholt Hall, near Shipley, Yorkshire.

Tenders must be returned to the undersigned not later than 9 a.m. on TUESDAY, the 3rd May, 1960.

The Corporation does not bind itself to accept the lowest or any Tender.

H. PATTEN,
Town Clerk.

Town Hall,
Bradford, 1.

RURAL DISTRICT COUNCIL OF BATTLE.

PARK WOOD ROAD, ORE, SEWERAGE SCHEME.

TENDERS are invited for the CONSTRUCTION of approx. 670 yd. of 6in. dia. FOUL SEWER and 6in. dia. STORM WATER SEWER, and 360yd. of 4in. dia. RISING MAIN, together with a PUMPING STATION, and all ancillary works.

Form of Tender, Specification and Bills of Quantities can be obtained from the Surveyor, The Watch Oak, Battle, on receipt of £3 3s., which will be refunded on receipt of a bona-fide Tender, not subsequently withdrawn.

The Drawings may be examined at the Surveyor's Offices during normal office hours.

Tenders, in the envelope provided, endorsed "Tender for Park Wood Road Sewerage Scheme," must be delivered to the undersigned by not later than 12 Noon on the 12th MAY, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

N. J. HEANEY,
Clerk of the Council.

The Watch Oak,
Battle, Sussex.
11th April, 1960.

CONTRACTS

FLINTSHIRE COUNTY COUNCIL.

RECONSTRUCTION OF HIGH STREET, CONNAH'S QUAY.

TENDERS are invited for the RECONSTRUCTION and WIDENING of the CARRIAGEWAY and FOOTPATHS in Two Sections of High Street, Connah's Quay. The work comprises generally some Demolition of Old Property, Excavations, Surface Water Drainage, the Construction of a Reinforced Concrete Carriageway, Footpath Construction, and new Brick Boundary Walling, etc.

Copies of the Specification, Bill of Quantities, Form of Tender, etc., may be obtained, and Drawings inspected, at the Office of the County Surveyor, E. W. W. RICHARDS, A.M.I.C.E., A.M.Inst.Struct.E., A.M.I.Mun.E., County Buildings, Mold, during normal working hours, upon the payment of a deposit of Three Guineas, which will be returned upon the receipt of a bona-fide Tender.

Tenders, in plain sealed envelopes, marked "Tender for High Street, Connah's Quay," to be delivered to the undersigned not later than 10 a.m., TUESDAY, 17th May, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

W. HUGH JONES,
Clerk to the County Council.

County Buildings,
Mold.

BOROUGH OF WATFORD.

WATER DEPARTMENT.

12IN. DIA. WATER MAIN—CASSIOBURY DRIVE TO WHIPPENDELL ROAD.

Contractors possessing the necessary experience and requisite plant, and wishing to TENDER for the LAYING of approx. 1,850 lin. yd. of 12in. dia. SPUN-IRON PIPES, together with ancillary works, are invited to submit their names to J. R. COLLINS, A.M.I.C.E., A.M.I.W.E., Borough Water Engineer and Manager, Town Hall, Watford, Herts., not later than 2 p.m. on TUESDAY, 3rd May, 1960.

Applications for documents must be accompanied by a deposit of £2 2s., which will be returnable on receipt of a bona-fide Tender.

Contract documents will be forwarded in due course, and tenderers will then be informed of the latest date for receipt of Tenders.

The Council does not bind itself to accept the lowest or any Tender.

GORDON H. HALL,
Town Clerk.

Town Hall,
Watford.

BOROUGH OF LYMINGTON.

MODERNISATION OF BARTON SEWAGE DISPOSAL WORKS.

The COUNCIL propose to invite FIXED-PRICE TENDERS for the MODERNISATION of the BARTON SEWAGE DISPOSAL WORKS, consisting mainly of the following:—

(1) Provision of new Reinforced Concrete Detritus Tank, Comminutors, Flow Recording Apparatus, etc.
(2) Demolition of existing Tanks and Provision of Seven new Reinforced Concrete Storm Water Tanks.
(3) Provision of Two new Reinforced Concrete Circular Settlement Tanks.
(4) Conversion of Four existing Settlement Tanks into Sludge Digestion Tanks.
(5) Provision of new Sludge Pump Houses, Pump Wells, Pumps, Drains, Rising Mains, etc.
(6) Provision of approx. 470yd. of new 24in. dia. Storm Water Outfall Sewer.
(7) Ancillary Buildings, Pipework, Service Roads, etc.

Drawings, prepared under the direction of HAROLD EDWARD STOPHER, M.Sc.(Eng.), A.M.I.C.E., F.R.I.C.S., M.I.Mun.E., Borough Engineer and Surveyor, can be seen at the Town Hall, High Street, Lymington, during normal working hours.

It is the Council's intention to select a number of contractors who will be furnished with Bills of Quantities, etc., during June, 1960, and asked to submit Fixed-price Tenders by a date to be decided later.

Contractors who wish to tender are therefore requested to submit their names for consideration to the Borough Engineer before 11th MAY, and should list full particulars of any similar work already carried out, with names and addresses, preferably of local authorities, to whom reference may be made.

A. L. SLATER,
Town Clerk.

Town Hall,
Lymington.

BOROUGH OF MIDDLETON.

STREET LIGHTING CONVERSION EQUIPMENT.

TENDERS are invited for the SUPPLY of EQUIPMENT for the CONVERSION of 109 STREET LIGHTING POINTS from Supply by Gas to that by Electricity.

Conditions of Contract, Specification, Bill of Quantities and Conditions and Form of Tender may be obtained on application to the Borough Engineer and Surveyor, Town Hall, Middleton, near Manchester, and should be duly completed and returned, in plain sealed envelopes endorsed "Tender—Gas Conversions—Scheme VII," to the undersigned not later than 12 Noon on WEDNESDAY, 11th May, 1960.

Sample equipment is to be delivered not later than 12 Noon on MONDAY, 9th May, 1960, from whence, after inspection, it shall be collected as soon as possible after receipt of the Borough Engineer's written request.

F. JOHNSTON,
Town Clerk.

Town Hall,
Middleton,
Near Manchester.
4th April, 1960.

BOROUGH OF BARKING.

BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

RECONSTRUCTION OF RIPPLE ROAD, A.123 (BLAKE AVENUE (WEST) TO UPNEY LANE).

TENDERS, returnable by 9 a.m. on 23rd MAY, 1960, are invited for the REMOVAL of approx. 6,400 sq. yd. of WOOD BLOCK PAVING, the REPAIR of DEFECTIVE CONCRETE FOUNDATIONS where necessary, and SURFACING with TWO-COURSE HOT ROLLED ASPHALT.

Specification, Bill of Quantities and Form of Tender can be obtained on application to the Borough Engineer and Surveyor, Town Hall, Barking, Essex.

E. R. FARR,
Town Clerk.

Town Hall,
Barking.

CONTRACTS

CITY OF WORCESTER.

ANNUAL ROAD SURFACING CONTRACT.

TENDERS are invited for HEATING and PLANING approx. 8,000 sq. yd. of CARRIAGEWAY SURFACING and for PROVIDING and LAYING MECHANICALLY 16,600 sq. yd. of HOT-ROLLED ASPHALT and PRECOATED CHIPPINGS; for PROVIDING and LAYING approx. 300 sq. yd. of TWO-COURSE DENSE TAR SURFACING at BUS STOPS, together with Trench Reinstatement Works in Hot-rolled Asphalt.

Tender documents are obtainable from the City Engineer, 22 Bridge Street, Worcester, upon deposit of Two Guineas, returnable on receipt of a bona-fide Tender.

Closing date, TUESDAY, 24th May, 1960.

BERTRAM WEBSTER,
Town Clerk.

Guildhall,
Worcester.

ROMNEY MARSH RURAL DISTRICT COUNCIL.

DYMCHURCH SEWERAGE AND SEWAGE DISPOSAL. CONTRACT NO. 1.

TO CONTRACTORS.

The above-named Council invite TENDERS for the EXECUTION of SEWERAGE and SEWAGE DISPOSAL WORKS, comprising the Furnishing and Laying of about 47,500yd. of Spun-iron and Stoneware Sewers, Pumping and Air Mains, varying in size from 15in. to 2in., and the Construction of Manholes, 17 Ejector Stations, Compressor Station, Sedimentation Tanks, Percolating Filters, Sludge Drying Beds, Pumping Station, Pipework, etc., and other appurtenant works.

Contractors desirous of tendering are requested to send their names and addresses to D. BALFOUR AND SONS, M.I.C.E., 131 Victoria Street, Westminster, S.W.1, accompanied by a cheque deposit of £10 made payable to the Romney Marsh Rural District Council, not later than MONDAY, 2nd May, 1960, after which full particulars will be forwarded. The deposit will be returned on receipt of a bona-fide Tender and the return of Contract documents after a Contract has been let.

It is essential that the contractor shall have had considerable experience in similar works and be prepared to furnish security with an approved society for the fulfilment of the Contract.

Tenders, in a plain envelope endorsed "Tenders for Sewerage and Sewage Disposal," must be sent to the undersigned by a date to be given by the Engineers.

The lowest or any Tender will not necessarily be accepted by the Council.

W. C. BALCHIN,
Clerk to the Council.

Prescott,
New Romney,
Kent.
13th April, 1960.

SWALE RURAL DISTRICT COUNCIL.

BAPCHILD SEWERAGE.

Experienced civil engineering contractors who wish to TENDER for the WORKS DESCRIBED BELOW are invited to apply, giving the names of three Engineers for whom they have carried out similar work, to the Engineer and Surveyor by 10 o'clock on the 4th MAY, 1960.

The work will comprise the Construction of 2,500 lin. yd. of 6in. dia. Glazed Stoneware and 9in. dia. Precast Concrete Pipe Sewers laid in Roads (including two crossings of the A.2), Orchards, Gardens and other private lands; the Connection of existing House Drainage to the new system by 1,000 lin. yd. of 4in. dia. and 6in. dia. Glazed Stoneware Drains; the Construction of a Pumping Station to house automatic pumping equipment; the Construction of 400 lin. yd. of 5in. dia. Spun-iron Rising Main laid in road verge and track; and other ancillary works.

Documents will be available at the end of May and it is intended that construction of the works shall be commenced in the Autumn.

BRYAN TASSELL,
Clerk of the Council.

Whitehall,
48/50 Bell Road,
Sittingbourne,
Kent.
13th April, 1960.

HAVERFORDWEST RURAL DISTRICT COUNCIL.

CROESGOCH SEWERAGE SCHEME.

FIXED-PRICE TENDERS are invited from competent civil engineering contractors for CARRYING OUT a SEWERAGE and SEWAGE DISPOSAL SCHEME at CROESGOCH, comprising approx. 850yd. of 6in. Sewers, Construction of Manholes and of Sewage Treatment Plant, with all ancillary Works.

Croesgoch is situated some 16 miles north-west of Haverfordwest and 11 miles west of Fishguard.

Plans, Specification and Bills of Quantities may be obtained from the Council's Engineer and Surveyor, 8-10 Picton Place, Haverfordwest (Telephone 1000). No deposit is required, but contractors are expected to return all documents, and a charge may be made in the event of non-return.

Tenders, clearly marked "Croesgoch Sewerage," should be sent to the Clerk of the Council, 8-10 Picton Place, Haverfordwest, Pembs., not later than 20th MAY, 1960.

The Council does not undertake to accept the lowest or any Tender, and acceptance is subject to the approval of Welsh Office, Ministry of Housing and Local Government.

HENRY J. DICKMAN,
Clerk of the Council.

Council Offices,
8-10 Picton Place,
Haverfordwest.
11th April, 1960.

HUNTINGDON RURAL DISTRICT COUNCIL.

TENDERS FOR BUNGALOWS.

TENDERS, on a FIXED-PRICE BASIS, are invited for the ERECTION of SIX BUNGALOWS at GREAT STUKELEY.

Bills of Quantities and Forms of Tender may be obtained from the Council's Surveyor, MR. J. S. SIMMS, at the undermentioned address, on deposit of £2 2s., which will be returned on receipt of a bona-fide Tender.

Tenders should be returned in the envelope provided so as to reach me not later than Noon on WEDNESDAY, 18th of May, 1960.

The Council does not bind itself to accept the lowest or any Tender, and final acceptance will be subject to the approval of the Ministry of Housing and Local Government.

W. MIDWOOD,
Clerk of the Council.

Montagu House,
Huntingdon.
13th April, 1960.

CONTRACTS

BOROUGH OF EASTLEIGH.

VELMORE HOUSING ESTATE (STAGE VII).

SHOPS AND FLATS AND PRECINCT LAYOUT.

The Corporation invite TENDERS for the ERECTION of a BLOCK of NINE SHOPS, with 12 ONE-BEDROOM FLATS and FOUR THREE-BEDROOM MAISONNETTES OVER, together with the Precinct Layout, Drainage Works, Out-houses, etc.

Contractors wishing to Tender should by Tuesday, 3rd May, 1960, apply for Bills of Quantities and Forms of Tender to the Borough Engineer, Town Hall, Eastleigh, Hants, enclosing a deposit cheque value Two Guineas, made payable to the Borough of Eastleigh, such deposit to be refunded upon receipt of a bona-fide Tender and the return of all documents.

The Contract Drawings may be inspected at the office of the Borough Engineer.

Tenders are to be submitted to the undersigned not later than Noon on MONDAY, 6th June, 1960.

The Council do not bind themselves to accept the lowest or any Tender they may receive.

ROLAND J. RODDIS,
Town Clerk.

Town Hall,
Eastleigh,
Hampshire.
14th April, 1960.

BOROUGH OF KETTERING.

CATTLE MARKET.

FIXED-PRICE TENDERS are invited for the CONSTRUCTION of a NEW CATTLE MARKET in NORTHFIELD AVENUE, Kettering.

The Work comprises all General Excavation Work, Laying Foul and Surface Water Sewers, Constructing Roads, Paved Areas and Parking Areas, Installing Penning, Erecting Sale Rings, Dairy Cattle Building, Pig Building and other ancillary Works and Services in an area of approx. eight acres.

The Specification, Bills of Quantities and Form of Tender may be obtained from H. G. PERRY, ESQ., M.I.Mun.E., M.R.S.H., Borough Engineer and Surveyor, 3 Gold Street, Kettering, Northants, on payment of a deposit of Five Guineas, which will be refunded on receipt of a bona-fide Tender not subsequently withdrawn and the return of all documents.

The Drawings and General Conditions of Contract may be inspected during office hours at the office of the Borough Engineer and Surveyor.

Tenders are to be enclosed in plain sealed envelopes endorsed "Cattle Market Tender," and delivered to the undersigned not later than 12 Noon on MONDAY, 20th June, 1960.

The Council does not bind itself to accept the lowest or any Tender.

D. DUNSFORD PRICE,
Town Clerk.

Council Offices,
Huxloe Place,
Kettering,
Northants.
April, 1960.

BOROUGH OF WORTHING.

CONSTRUCTION OF TIMBER GROYNES, WORTHING.

TENDERS are invited for the CONSTRUCTION of TIMBER GROYNES, EXTENSIONS to EXISTING GROYNES, using materials to be provided by the Corporation.

The Bill of Quantities, Specification and Form of Tender may be obtained from the Borough Engineer and Surveyor, Town Hall, Worthing, on payment of a deposit of Two Guineas, which will be returned on receipt of a bona-fide Tender or return of the Contract documents.

The General Conditions of Contract and the Drawing may be inspected at the office of the Borough Engineer and Surveyor.

Tenders, in the plain sealed envelope provided and endorsed "Tender for Groynes," should be delivered to the undersigned not later than MONDAY, 9th May, 1960.

The Corporation does not bind itself to accept the lowest or any Tender.

ERNEST G. TOWNSEND,
Town Clerk.

Town Hall,
Worthing.
13th April, 1960.

CITY OF LIVERPOOL.

ARCHITECTURAL AND HOUSING DEPARTMENT.

STANDARD 11-STOREY TOWER BLOCKS OF FLATS ON VARIOUS SITES IN LIVERPOOL OR THE IMMEDIATE VICINITY.

INVITATION OF TENDER.

APPLICATIONS are invited from building and civil engineering firms desirous of TENDERING for the BUILDING of 11-STOREY TOWER BLOCKS of FLATS on VARIOUS SITES in or around LIVERPOOL, on the basis of a structural system to be nominated by themselves.

Firms who have developed their own technique of construction for flats of this type, or who have had experience in this class of work, and who make application will be supplied with outline plans and specifications of the blocks, which have been prepared by the City Architect and Director of Housing, together with further details of the Conditions of Tender.

Firms wishing to receive the Specification, etc., and Tender documents should apply in writing to the City Architect and Director of Housing, Blackburn Chambers, Dale Street, Kingsway, Liverpool, 2, not later than 10 a.m. on MONDAY, 9th May, 1960.

THOMAS ALKER,
Town Clerk.

(J.6147)

ST. NEOTS RURAL DISTRICT COUNCIL.

THREE SHIRE WATER TOWER.

The above Council invites TENDERS, on a FIXED-PRICE BASIS, from experienced contractors for the CONSTRUCTION of a REINFORCED CONCRETE WATER TOWER, capacity 75,000 gallons, height approx. 60ft., at COVINGTON, Huntingdonshire.

Detail Drawings may be seen during office hours at the offices of the Consulting Engineers, MESSRS. PICK, EVERARD, KEAY AND GIMSON, 6 Millstone Lane, Leicester, from whom the Specification, Bill of Quantities and Key Drawings may be obtained on payment of a deposit of Five Guineas, which will be refunded on receipt of a bona-fide Tender and the return to the Engineers of all documents and Drawings supplied.

Tenders, on the loose form and in the envelope provided, are to be delivered to the undersigned not later than 10 o'clock in the Forenoon of FRIDAY, the 17th May, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

D. J. DEAR,
Clerk of the Council.

Council Offices,
32a New Street,
St. Neots, Hunts.
13th April, 1960.

CONTRACTS

COUNTY BOROUGH OF DUDLEY.

ERECTION OF GARAGES, RUSSELLS HALL ESTATE, DUDLEY.

APPLICATIONS are invited from building contractors having the necessary plant, personnel and organisation, to be included in a list of contractors from whom TENDERS will be invited for the ABOVE WORK. The Contract is on a "Fixed-price" basis, and comprises the Erection of 72 Garages on one site, and 17 Garages on another site, together with Tarmacadam-paved Forecourts, Drainage, etc. The construction is of brick, with timber and asbestos roofs.

Applications to Tender must be submitted to the Borough Architect, 5 Ednam Road, Dudley, Worcs., not later than TUESDAY, 3rd May, 1960, and must be accompanied by a deposit of £2 2s., returnable upon receipt of a bona-fide Tender. Cheques to be made payable to Dudley Corporation. Bills of Quantities and Forms of Tender will be sent out shortly after the above closing date.

P. D. WADSWORTH,
Town Clerk.

The Council House,
Dudley, Worcs.
14th April, 1960.

COUNTY BOROUGH OF WOLVERHAMPTON.

ERECTION OF DWELLINGS.

Building contractors are invited to TENDER, on a FIXED-PRICE BASIS, for the ERECTION of 66 DWELLINGS of various types at POND LANE, Wolverhampton. The majority will have reinforced concrete raft foundations.

Form of Tender and Bills of Quantities may be obtained up to 2nd MAY from the BOROUGH ENGINEER, Town Hall, Wolverhampton, on payment of a deposit of £2 2s., which will be refunded upon receipt of a bona-fide Tender.

BOROUGH OF HARTLEPOOL.

HOUSING SITE PREPARATORY WORKS.

CONSTRUCTION OF ROADS, SEWERS AND FOOTPATHS.

TENDERS are invited for the CONSTRUCTION of HOUSING SITE PREPARATORY WORKS to a SITE near HART STATION, which is to be used for the Erection of Houses for Sale.

The Work involves the Construction of 750yd. of Sewer, increasing in size from 6in. to 18in., approx. 880yd. of Kerbing, Construction of 2,300 sq. yd. of Carriageway in Wetmix and Bituminous Macadam, together with Footpaths and other ancillary Works.

Plans may be inspected at, and Bills of Quantities and Forms of Tender may be obtained from, the office of the Borough Engineer, Borough Buildings, Hartlepool, on payment of a deposit of £2, which will be refunded on receipt of a bona-fide Tender.

Tenders, in plain sealed envelopes endorsed "Tender—Housing Site Preparatory Works, Hart Station," must be delivered to the undersigned not later than 12 Noon, 23rd MAY, 1960.

L. O. WILLIAMS,
Town Clerk.

Borough Buildings,
Hartlepool.

BOROUGH OF HARTLEPOOL.

ERECTION OF PROPRIETARY-TYPE HOUSES, KING OSWY DRIVE, WEST VIEW.

TENDERS are invited for the DESIGN and ERECTION of PROPRIETARY-TYPE HOUSES on a SITE NORTH of KING OSWY DRIVE, WEST VIEW, Hartlepool. The site is suitable for the erection of approx. 24 houses. Further particulars and Plans of the Site may be obtained from the office of the Borough Engineer, Borough Buildings, Hartlepool.

Tenders, in plain sealed envelopes endorsed "Tender—Houses, North King Oswy Drive," must be delivered to the undersigned not later than 12 Noon, SATURDAY, 4th June, 1960.

L. O. WILLIAMS,
Town Clerk.

Borough Buildings,
Hartlepool.

NEWMARKET RURAL DISTRICT COUNCIL.

BURWELL SEWERAGE AND SEWAGE TREATMENT WORKS.

CONTRACT NO. 1.

FIXED-PRICE TENDERS are invited from experienced civil engineering contractors for the CONSTRUCTION of approx. SEVEN MILES of 7in., 9in. and 12in. GLAZED WARE SEWERS, with PRECAST CONCRETE MANHOLES, 5in. and 6in. SPUN-IRON PUMPING MAINS, THREE PUMPING STATIONS, a SEWAGE TREATMENT WORKS, HOUSE CONNECTIONS and other appurtenant Works.

The Treatment Works include Reinforced Concrete Sedimentation Tanks, Percolating Filters, Humus Tanks, Sludge Drying Beds, Site Roads, Store Building and Fencing.

The works will be located in the village of Burwell, in the Newmarket Rural District of Cambridgeshire.

The Contract period is 18 months, but a major portion of the Contract, including the treatment works and a pumping station, must be completed in nine months.

Instructions to Tenderers, Form of Tender, Conditions of Contract, Specification, Bills of Quantities and Drawings may be obtained on and after 25th April, 1960, by application to the Council's Consulting Engineers, MESSRS. HARRY BROMPTON AND PARTNERS, 7 Hobart Place, Westminster, London, S.W.1, upon payment of a deposit of Ten Guineas by cheque made payable to the Newmarket Rural District Council, which deposit will be returned on receipt of a bona-fide Tender not subsequently withdrawn and on return of all documents and Drawings.

Tender documents and Drawings may be examined at the offices of the Council and the Consulting Engineers by appointment.

Tenders are to be submitted to the undersigned not later than Noon on MONDAY, 23rd May, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

H. W. EVANS,
Clerk of the Council.

Council Offices,
Park Lane,
Newmarket,
Suffolk.

WOLVERHAMPTON CORPORATION WATER UNDERTAKING.

Contractors desirous of TENDERING for the LAYING of about EIGHT MILES of 18in. STEEL and SPUN-IRON PIPELINE for the Wolverhampton Corporation are invited to send to the WATER ENGINEER AND MANAGER, 37 Merridale Road, Wolverhampton, a deposit of £3 for the Contract documents, not later than the 2nd MAY, 1960, which deposit will be refunded on receipt of a bona-fide Tender not subsequently withdrawn and the return of the documents.

CONTRACTS

COUNTY OF DORSET.

POLICE CLOTHING.

The Dorset Standing Joint Committee invite TENDERS for the SUPPLY of CLOTHING, including Shirts, Collars and Ties, for the Dorset Constabulary. Forms of Tender, showing types and approximate quantities required, may be obtained from the Chief Constable, Constabulary Headquarters, Dorchester.

Sealed Tenders, endorsed "Tender for Police Clothing," must be received by me by the 9th MAY, 1960.

The Committee do not bind themselves to accept the lowest or any Tender.

C. P. BRUTTON,
Clerk of the
Standing Joint Committee.

County Hall,
Dorchester.
13th April, 1960.

BOROUGH OF EPSOM AND EWELL.

FOOTPATH REPAIRS, 1960.

The Corporation invite TENDERS from public works contractors for the REPAIR and SURFACING of FOOTPATHS in the CORPORATION RECREATION GROUNDS and OTHER PROPERTIES.

Copies of the Specification, Form of Tender and Bill of Quantities may be obtained from the office of COLIN COBBETT, A.M.I.C.E., M.I.Mun.E., Borough Engineer and Surveyor, Town Hall, Epsom, during working hours, upon payment of £2 2s. deposit. Deposits will be returned to contractors submitting a bona-fide Tender not subsequently withdrawn.

Tenders must be delivered to me at the address mentioned below not later than Noon on MONDAY, 16th May, 1960, and no Tender will be received and considered unless it is enclosed in a plain sealed envelope endorsed "Footpath Repairs, 1960." This envelope must not bear any mark or name indicating the sender.

The Corporation do not bind themselves to accept the lowest or any Tender.

EDWARD MOORE,
Town Clerk.

Town Hall,
The Parade,
Epsom,
Surrey.
April, 1960.

BURGH OF FORT WILLIAM.

GLEN NEVIS WATER SCHEME.

CONTRACT TWO.

The Burgh of Fort William invites TENDERS from experienced contractors for the EXTENSION of the FILTER HOUSE, CONSTRUCTION of DIVIDING WALL in SERVICE RESERVOIR, and the SUPPLY and LAYING of 2,800yd. of 9in. and 6in. PIPE.

Copies of the Specification, Bill of Quantities and Plans may be obtained from the Consulting Engineers, MESSRS. CARTER AND WILSON, C.E., 51 Queen Street, Edinburgh, 2. Applications must be accompanied by cheque for £4 4s., payable to Messrs. Carter and Wilson, which will be returned if both a Tender is submitted and the Plans are returned. An Engineer will attend on the Glen Nevis Road near the point where it leaves the main Fort William-Inverness road at 2 p.m. on Tuesday, 3rd May. Plans may be seen on the same day from 10 a.m. at the office of the Burgh Surveyor.

Sealed Tenders, marked "Glen Nevis Water Scheme," are to be lodged with Robert Dow, Town Clerk, Fort William, by 2 p.m. on WEDNESDAY, 18th May. The Plans are to be returned by the same date direct to Messrs. Carter and Wilson.

ROBERT DOW,
Town Clerk.

BOROUGH OF HARROW.

FENCING AND ACCOMMODATION WORKS.

TENDERS are invited for FENCING and ACCOMMODATION WORKS in MARSH ROAD, Pinner, consisting of the Building of Dwarf Walls, Mass Concrete Retaining Walls, and Erection of Gates and Fences, and similar works, at 11 Properties.

Drawings and Conditions of Contract may be inspected at the Office of, and a copy of the Form of Tender, Specification and Bills of Quantities obtained on application to the Borough Engineer, at the Council Offices, 48 Uxbridge Road, Stanmore, Middlesex, on payment of Two Pounds by crossed cheque, made payable to the Harrow Borough Council, returnable where a bona-fide Tender reaches me within the prescribed time.

Tenders, on prescribed forms, enclosed in a plain envelope bearing no indication of the sender, and endorsed "Tender—Accommodation Works, Marsh Road," to be delivered to my Office not later than 10 a.m., TUESDAY, 10th May, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

DAVID PRITCHARD,
Town Clerk.

Council Offices,
Harrow Weald Lodge,
Harrow, Middx.

BOROUGH OF FAVERSHAM.

LOWER ROAD ESTATE (EASTERN SECTION).

TENDERS are invited for the CARRYING OUT of SECONDARY SITE WORKS at the Lower Road Estate (Eastern Section).

The work comprises approx. 2,151 sq. yd. of in-situ Granolithic Paving, 1,015 sq. yd. of Grass Forecourt, and incidental works.

Form of Tender, Specification, Bill of Quantities, and further details, may be obtained from the Borough Surveyor, Municipal Offices, Faversham.

Tenders to be received by Noon on MONDAY, 30th May, 1960.

F. G. BISHOP,
Town Clerk.

Municipal Offices,
Faversham.
19th April, 1960.

ST. AUSTELL URBAN DISTRICT COUNCIL.

TENDERS are invited for the CONSTRUCTION of 4,403 lin. yd. of 6in. CONCRETE TUBE SEWER at RUDDLEMOOR, St. Austell.

The Specification and Bill of Quantities can be obtained from H. G. KING, D.S.C., A.M.I.C.E., M.I.Mun.E., Engineer and Surveyor, Municipal Offices, Truro Road, St. Austell, on payment of a deposit of Three Guineas, which will be returned on receipt of a bona-fide Tender.

Tenders, in a plain sealed envelope endorsed "Tender for Ruddlemoor Sewerage," must be delivered to the undersigned on or before First Post on SATURDAY, 4th June, 1960.

Dated this 20th day of April, 1960.

(Signed) L. E. SAUNDERS,
Clerk to the Council.

Municipal Offices,
Truro Road,
St. Austell.

CONTRACTS

BUCKS. COUNTY COUNCIL.

NEWPORT PAGNELL—NORTHAMPTON ROAD, A.50.

ROADWORKS—LATHBURY VILLAGE.

TENDERS are invited for ROADWORKS (approx. 500yd.), comprising Concrete Widening, Channelling, Kerbing, Tarmacadam Shaping, Drainage and ancillary Works.

Drawings may be seen at the offices of the County Surveyor, County Offices, Aylesbury, from whom Contract documents may be obtained on payment of a deposit of £2, returnable on receipt of a bona-fide Tender.

Tenders must be received by me by 10 a.m. on MONDAY, 23rd May, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

R. E. MILLARD,
Clerk of the Council.

County Hall,
Aylesbury.
April, 1960.

COUNTY BOROUGH OF MERTHYR TYDFIL.

NEW BRIDGE OVER THE RIVER TAFF.

TENDERS are invited for the CONSTRUCTION of a NEW TWO-SPAN SKEW ROAD BRIDGE over the RIVER TAFF at YNYSGAU, Merthyr Tydfil.

The Work includes the Construction of Masonry-faced Concrete Abutments, Pier and Wing Walls, with a Deck of Precast Pretensioned Concrete Beams. The total span of the bridge is approx. 76ft., and the Contract also includes approx. 600ft. of Approach Road Works.

Copies of the Tender documents, Plans, Bridge Drawings and details may be obtained from the office of the Borough Engineer, Town Hall, Merthyr Tydfil, upon payment of a deposit of Five Guineas, returnable upon receipt of a bona-fide Tender.

Tenders, in plain sealed envelopes marked "Ynysgau Bridge," must be delivered to the undersigned not later than 14th JUNE, 1960.

The Council do not bind themselves to accept the lowest or any Tender, and will not defray any expenses incurred by those tendering.

T. S. EVANS,
Town Clerk.

Town Hall,
Merthyr Tydfil.

COUNTY BOROUGH OF SWANSEA.

BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

PENLAN MULTILATERAL SCHOOL.

PLAYING FIELDS.

TENDERS are invited for the COMPLETION WORKS in connection with the LAYING-OUT of PLAYING FIELDS for Penlan Multilateral School.

The works comprise the Laying-out of 12 acres of Playing Fields, including Hardplaying area, Seven Tennis Courts, and Cricket Square.

Form of Tender, Conditions of Contract, Specification and Bills of Quantities may be obtained from, and the Drawings inspected at, the Office of the Borough Engineer and Surveyor, Guildhall, Swansea, on deposit of £2. The deposit will be returned on receipt of a bona-fide Tender which is not subsequently withdrawn.

Tenders, on the prescribed Form of Tender, in sealed envelopes bearing no name or mark indicating the sender, and endorsed "Tender for Penlan School Playing Fields," must be delivered to me not later than Mid-day on the 20th day of MAY, 1960, by Registered Post.

The Council does not bind itself to accept the lowest or any Tender.

T. B. BOWEN,
Town Clerk.

The Guildhall,
Swansea.
14th April, 1960.

BOROUGH OF SURBITON.

DEMOLITION OF 14 SOUTH PLACE.

OFFERS are invited for the DEMOLITION of the DETACHED HOUSE known as 14 SOUTH PLACE, Surbiton, in accordance with the Specification and General Conditions of Contract, which may be obtained from the office of MR. R. THIRLWAY, M.I.Mun.E., M.I.Struct.E., Borough Engineer and Surveyor, Council Offices, Surbiton, Surrey.

Tenders, on the form provided, enclosed in the endorsed envelope provided and bearing no name or mark indicating the sender, must be delivered to the undersigned and received by him not later than 5 p.m. on FRIDAY, 13th May, 1960.

The Corporation do not bind themselves to accept the highest or any offer.

JOHN H. A. CRUNDELL,
Town Clerk.

ST. ALBANS CITY COUNCIL.

EXTENSION TO VERULAMIUM MUSEUM.

TENDERS are invited for the proposed EXTENSION to the VERULAMIUM MUSEUM, ST. MICHAEL'S STREET, St. Albans.

Form of Tender and Bill of Quantities can be obtained from, and Drawings inspected at, the office of the City Engineer and Surveyor, 16 St. Peter's Street, St. Albans, on deposit of Two Guineas, which will be refunded on receipt of a bona-fide Tender not subsequently withdrawn.

Tenders, sealed in the endorsed envelope provided, to reach the undersigned not later than WEDNESDAY, 18th May, 1960.

B. V. ENTWISTLE,
Town Clerk.

38 St. Peter's Street,
St. Albans, Herts.

MERIDEN RURAL DISTRICT COUNCIL.

BICKENHILL SEWERAGE SCHEME.

TENDERS are invited for the CONSTRUCTION of approx. 1,335 lin. yd. of 9in. dia. and 2,100 lin. yd. of 6in. dia. GLAZED STONEWARE FOUL SEWER, together with 46 Manholes, and all ancillary works.

Documents may be obtained from, and Drawings inspected at, the Office of the Engineer and Surveyor, The Old Vicarage, High Street, Coleshill, near Birmingham, upon the payment of a deposit of Two Guineas, which will be refunded upon receipt of a bona-fide Tender.

Tenders, in envelopes which will be supplied with the documents, must be delivered to the undersigned not later than Noon on MONDAY, 23rd May, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

R. E. HALE,
Clerk of the Council.

Old Bank House,
Coleshill,
Birmingham.
14th April, 1960.

CONTRACTS

COUNTY BOROUGH OF BOOTLE.

TOWN HALL CENTRAL HEATING SCHEME—STAGE II.

TENDERS are invited for the ABOVE WORK, comprising the INSTALLATION of DISTRIBUTION PIPING, RADIATORS, and ancillary work, to the Town Hall and Municipal Buildings.

Documents are obtainable from the Borough Engineer, and should be returned to the undersigned not later than 10 a.m. on MONDAY, 23rd May, 1960.

HAROLD PARTINGTON,
Town Clerk.

Town Hall,
Oriel Road,
Bootle, 20,
Lancs.

HALE URBAN DISTRICT COUNCIL.

TARSPRAYING.

FIXED-PRICE TENDERS are invited for SURFACE DRESSING of about 37,000 sq. yd. of CARRIAGEWAYS.

Tendering documents and further information may be obtained from the Engineer and Surveyor.

Tenders must be in plain sealed envelopes endorsed "Tender—Tarspraying," and reach me by 6th MAY, 1960.

R. W. HORSFALL,
Clerk of the Council.

Council Offices,
Hale, Ches.

HORBURY URBAN DISTRICT COUNCIL.

HORBURY SEWERAGE SCHEME.

TENDERS are invited for the FOLLOWING:

CONTRACT No. 1—The Construction of approx. 1,086yd. of 15in. to 33in. dia. Concrete Pipe Sewers, Manholes, Filter, Humus Tanks, Sludge Beds and two Pumping Stations, together with ancillary works, at Horbury, near Wakefield, Yorkshire.

CONTRACT No. 2—The Supply and Erection at Horbury of Two 375-g.p.m. Filter Effluent Pumps and Two 200-g.p.m. Sludge Pumps, all complete with Electric Motors, Starters, and accessories.

Contractors wishing to tender should apply for the documents and Drawings to the Council's Consulting Engineers, JOHN H. HAISTE AND PARTNERS, Belmont House, 20 Wood Lane, Headingley, Leeds, 6, enclosing a deposit cheque value Three Guineas in respect of each Contract, made payable to the Horbury U.D.C., such deposit to be refunded upon receipt of a bona-fide Tender and the return of all the documents and Drawings.

Tenders are to be submitted to the undersigned not later than 12 Noon on the 20th MAY, 1960.

The Council do not bind themselves to accept the lowest or any Tender they may receive.

H. SENIOR,
Clerk to the Council.

Town Hall,
Horbury,
Near Wakefield.

RUISLIP - NORTHWOOD URBAN DISTRICT COUNCIL.

HIGHWAYS AND SEWER WORKS.

TENDERS are invited for the FOLLOWING WORKS:

(1) Eastcote Station Bridge Improvement—Widening, etc., of 200yd. length, including Provision of Service Roads, Bus Lay-bys, Brick-faced Retaining Walls, and ancillary works.

(2) Howletts Lane Improvement—Widening and Reconstruction (4,000 sq. yd. 7in. Reinforced Concrete Carriageway, 1,300 sq. yd. Tarmacadam Footways) and Construction of 450 lin. yd. Surface Water Sewer (15in., 18in. and 24in.), with ancillary works.

(3) Gatehill Road—Making-up approx. 280 lin. ft.

Tender documents can be obtained from the Engineer and Surveyor on payment of £2 2s. deposit each Contract, returnable on receipt of bona-fide Tender.

Tenders are to be returned to the undersigned by WEDNESDAY, 11th May, 1960.

EDWARD S. SAYWELL,
Clerk of the Council.

Council Offices,
Northwood, Middx.

RURAL DISTRICT COUNCIL OF PONTARDAWE.

(a) SCHEME FOR IMPROVEMENTS TO RHOS AND DISTRICT WATER SUPPLY.

(b) WATER SUPPLY SCHEME, RHIWFAWR.

TENDERS are invited from contractors experienced in such work, for the CARRYING OUT of the ABOVE WATER SUPPLY SCHEMES:

(a) Improvements to Rhos and District Water Supply Scheme.—The work comprises the Laying of 6in. dia. Cast-iron Supply Main along a rough access road and disused quarry for a distance of 200yd.; the Construction of a Pumping Station, and the Laying of 700yd. of 6in. dia. Cast-iron Rising Main, along a steep incline and through fields to discharge into an existing reservoir.

(b) Water Supply Scheme, Rhinfawr.—The work comprises of the Construction of a Pumping Station, the Laying of 1,100yd. of 3in. dia. Cast-iron Rising Main, the Construction of a Service Reservoir (capacity 35,000 gall.), and the Laying of 740yd. of 3in. Drain Asbestos-cement and 550yd. of 1½in. dia. Polythene Distribution Pipes.

Bills of Quantities and Forms of Tender may be obtained, and Plans and Conditions of Contract inspected, at the Office of MR. D. S. F. WILLIAMS, M.I.Mun.E., Engineer and Surveyor, Council Offices, Pontardawe, Glam., on payment of a deposit of £5 in respect of each Contract, made payable to the Pontardawe R.D.C., which will be returned on receipt of a bona-fide Tender and return of all documents loaned.

Tenders must be submitted in plain sealed envelopes and endorsed: (a) "Water Supply Scheme, Rhos." (b) "Water Supply Scheme, Rhiwfawr," so as to reach the undersigned not later than 12 Noon on WEDNESDAY, the 11th May, 1960.

The Council do not bind themselves to accept the lowest or any Tender, and reserve the right to let the Contracts separately. The successful tenderer will be required to execute a bond in the sum of 10 per cent. of the Contract price, where the surety is a bank or insurance company, for the proper performance and completion of the works.

D. GLYN MEREDITH.
Clerk to the Council.

Council Offices,
Pontardawe,
Glam.

April, 1960.

CONTRACTS

CITY OF ELY URBAN DISTRICT COUNCIL.

SURFACE DRESSING.

The Council invite TENDERS for approx. 22,500 sq. yd. of SURFACE DRESSING with Bitumen and ⅜in. Granite.

Forms of Tender, Specification and General Conditions of Contract can be obtained from the Council's Engineer and Surveyor, U.D.C. Offices, Lynn Road, Ely.

Tenders must be enclosed in the official envelope provided for the purpose, sealed and received by me not later than FRIDAY, 6th May, 1960.

J. E. WATKINS.
Clerk of the Council.

FARNHAM URBAN DISTRICT COUNCIL.

RESURFACING TENNIS COURT—BADSHOT LEA RECREATION GROUND.

TENDERS are invited for the ABOVE WORK. Specification, Conditions of Contract and Form of Tender can be obtained from the Engineer and Surveyor, Council Offices, South Street, Farnham, Surrey, on receipt of a deposit of £1 1s., which will be returned on receipt of a bona-fide Tender and/or the return of all documents.

Tenders should be delivered to the undersigned in the envelope provided not later than 9 a.m. on FRIDAY, 13th May, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

H. W. UNDERDOWN,
Acting Clerk of the Council.

Council Offices,
South Street,
Farnham,
Surrey.

BRENTWOOD URBAN DISTRICT COUNCIL.

PRIVATE STREET WORKS.

UPLANDS ROAD.

TENDERS are invited for the MAKING-UP of THIS STREET. Plan, Sections and Conditions of Contract may be inspected, and Specifications, Form of Tender, Bills of Quantities and Schedules obtained, from D. A. DALLAS, ESQ., M.B.E., A.M.I.C.E., Engineer and Surveyor, Council Offices, Brentwood, upon payment of a deposit of £1 1s., returnable upon receipt of a bona-fide Tender and the return of all documents.

Sealed Tenders on the prescribed form, in envelopes endorsed "Tender for Private Street Works," and bearing no indication of the sender, must reach me by 20th MAY, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

CLEMENT BOOTH,
Clerk to the Council.

KIRKBY URBAN DISTRICT COUNCIL.

PURCHASE OF TUBULAR METAL MARKET STALLS AND CANVAS COVERS.

The Council propose to invite FIXED-PRICE TENDERS for the SUPPLY of the FOLLOWING:

(a) 100 Collapsible Tubular Market Stalls, approx. size 10ft. 6in. x 8ft. overall.

(b) Canvas Covers, Back and End Cloths, etc., to match.

Firms wishing to submit a TENDER for either or both items should apply in writing for Specification, etc., to the Engineer and Surveyor, Kirkby Hall, Hall Lane, Kirkby, near Liverpool, within 10 days of the appearance of this advertisement.

W. BYRON,
Clerk of the Council.

ORPINGTON URBAN DISTRICT COUNCIL.

TENDERS are invited for the SUPPLY and DELIVERY of the FOLLOWING NEW VEHICLES AND PLANT:

(a) Bedford 6-ton Short-wheelbase Lorry (Diesel).

(b) Bedford-Lacre Sweeper-Collector Machine (Diesel).

(c) Wacker Vibro-Plate.

(d) Two Steel Platform General Purpose Trailers.

One Dennis 1947 2-ton Petrol Lorry (JKM369) is to be taken in part-exchange for item (a).

Specifications and Forms of Tender may be obtained from me.

Tenders to be submitted in plain sealed envelopes endorsed "Tender for ——," to the Clerk of the Council, Council Offices, Crofton Road, Orpington, by not later than 12 Noon on the 7th MAY, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

L. W. FREEMAN,
Engineer and Surveyor.

Civic Offices,
The Walnuts,
High Street,
Orpington, Kent.
April, 1960.

ATHERSTONE RURAL DISTRICT COUNCIL.

MANCETTER SEWERAGE.

CONTRACT NO. 1.

The Atherstone Rural District Council invite FIXED-PRICE TENDERS (in accordance with the Ministry of Housing and Local Government Circular No. 31/57) from competent civil engineering contractors having experience in similar work, for LAYING about 1,000yd. of 6in. dia. GLAZED STONEWARE SEWERS, 300yd. of 4in. dia. SPUN-IRON RISING MAIN, and for the CONSTRUCTION of an EJECTOR STATION, MANHOLES and incidental Work at Mancetter, Warwickshire.

Contractors wishing to submit a Tender should apply in writing to the Council's Consulting Engineers, MESSRS. RICHARDS AND DUMBLETON, Chartered Civil Engineers, 45 Newhall Street, Birmingham, 3, from whom copies of the Specification, Bills of Quantities and Form of Tender can be obtained on and after Friday, the 22nd April, 1960, on payment of a deposit of Two Pounds (£2) by cheque, payable to the Atherstone Rural District Council.

Deposits will be refunded to contractors who submit bona-fide Tenders not subsequently withdrawn and accompanied by Priced Bills of Quantities and after the return of any Drawings supplied.

Drawings, Specification and Bills of Quantities may be inspected at the Council Offices or at the offices of the Consulting Engineers during usual office hours, on and after Friday, the 22nd April, 1960.

Sealed Tenders, on the official Form of Tender, enclosed in the envelope provided and endorsed "Mancetter Sewerage—Contract No. 1," are to be delivered to the undersigned not later than Noon on MONDAY, the 16th May, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

G. CARLYON MAY,
Clerk of the Council.

Council Offices,
Atherstone,
Warwickshire.

CONTRACTS

COUNTY BOROUGH OF NORTHAMPTON.

Contractors wishing to TENDER for any of the FOLLOWING WORKS should apply to the Borough Engineer, Guildhall, Northampton, for particulars:

(a) Surface Dressing.
(b) Dense Bituminous Macadam Surfacing (Slag aggregate).
(c) Heating and Planing.
(d) Fine Cold Asphalt Skim Coating.
(e) Hot Rolled Asphalt Inserts at Bus Stops.

Tenders returnable by MONDAY, 2nd May.

C. E. VIVIAN ROWE,
Town Clerk.

BOROUGH OF ELLESMERE PORT.

CONTRACT NO. 291.

43 TRADITIONAL HOUSES AND TWO BRICK GARAGES.

NORTH WHITBY ESTATE—PART IV—ELLESMERE PORT.

TENDERS are invited for the CONSTRUCTION of 43 TRADITIONAL HOUSES and TWO BRICK GARAGES on the North Whitby Estate—Part IV, including all necessary ancillary work.

Contract documents obtainable from the Borough Engineer and Surveyor, Queen Street, Ellesmere Port, on the 30th APRIL, 1960.

Sealed Tenders, in the plain official envelope provided, must reach the undersigned by Post by not later than 5 p.m. on MONDAY, the 23rd May, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

R. J. BERNIE,
Town Clerk.

Municipal Offices,
Ellesmere Port,
Cheshire.
14th April, 1960.

BOROUGH OF ELLESMERE PORT.

CONTRACT NO. 260.

PROPOSED THREE-STOREY FLATS—CHURCH STREET/QUEEN STREET, ELLESMERE PORT.

TENDERS are invited for the CONSTRUCTION of ONE BLOCK, comprising Six One-bedroom Flats, Church Street/Queen Street, Ellesmere Port, including all necessary ancillary works.

Contract documents obtainable from the Borough Engineer and Surveyor, Queen Street, Ellesmere Port, on the 30th APRIL, 1960.

Sealed Tenders, in the plain official envelope provided, must reach the undersigned by Post by not later than 5 p.m. on MONDAY, the 23rd May, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

R. J. BERNIE,
Town Clerk.

Municipal Offices,
Ellesmere Port,
Cheshire.
14th April, 1960.

BOROUGH OF KEIGHLEY.

BOROUGH ENGINEER'S DEPARTMENT.

TENDERS are invited for the PROVISION and APPLICATION of REFINED TAR and/or BITUMEN to ROADS. Total quantity is approx. 37,000 gallons.

Forms of Tender, Conditions of Contract and Specification may be obtained from the Office of the Borough Engineer and Surveyor, College Street, Keighley.

The lowest or any Tender will not necessarily be accepted.

Tenders, in plain sealed envelopes endorsed "Surface Dressing," are to be delivered to the Office of the Town Clerk, Town Hall, Keighley, not later than 10 a.m. on TUESDAY, the 10th May, 1960.

H. W. SMITH,
Town Clerk.

Town Hall,
Keighley, Yorks.

SHIPLEY URBAN DISTRICT COUNCIL.

EXTERNAL PAINTING OF COUNCIL HOUSES.

(1) 54 THREE-STOREY FLATS, WOODEND, LEEDS ROAD, SHIPLEY.
(2) 178 HOUSES AND BUNGALOWS, CRAG ROAD ESTATE, WINDHILL, SHIPLEY.

TENDERS are invited from painting contractors for the EXTERNAL PAINTING of COUNCIL HOUSES.

Specification and Tender Forms may be obtained from the Engineer and Surveyor, Town Hall, Shipley, on payment of a deposit of £2 2s., which will be returned on receipt of a bona-fide Tender. The Form of Contract may be inspected at the above office, and contractors may Tender for one or both contracts.

Sealed Tenders should be delivered to the undersigned in a plain envelope bearing no mark indicating the sender, and endorsed "Tender for Painting," not later than 10 a.m., FRIDAY, 6th May, 1960.

ERNEST PEARS,
Clerk and Solicitor.

Town Hall,
Shipley,
Yorkshire.
April, 1960.

THURROCK URBAN DISTRICT COUNCIL.

ENGINEER AND SURVEYOR'S DEPARTMENT.

PROPOSED ROUNDABOUT, JUNCTION STANFORD ROAD (A.13) AND BRENTWOOD ROAD (A.128), ORSETT.

TENDERS are invited for the CONSTRUCTION of a ROUNDABOUT, the Work comprising approx. 8,600 sq. yd. Carriageway, 1,900 lin. yd. Kerbing, 600 lin. yd. Surface Water Sewers, together with ancillary Works.

Copies of the Form of Tender, Specification and Bills of Quantities may be obtained from the Engineer and Surveyor, Council Offices, Whitehall Lane, Grays, on payment of £2 2s. deposit, which will be refunded on receipt of a bona-fide Tender and the return of all documents.

Drawings and General Conditions of Contract may be inspected at the Council Offices during normal office hours.

Tenders, accompanied by Specification and Priced Bill of Quantities in a plain sealed envelope endorsed "Roundabout A.13/A.128, Orsett," bearing no indication of the sender, must be delivered to reach the undersigned by not later than 12 Noon on TUESDAY, 17th May, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

A. E. POOLE,
Clerk of the Council.

Council Offices,
Whitehall Lane,
Grays.

CONTRACTS

CITY OF LEICESTER.

PRIVATE STREET WORKS.

CONTRACT NO. 21.

TENDERS are invited from contractors experienced in work of a similar nature, for the REPAIR of SIX PRIVATE STREETS.

The work comprises Re-laying Slabbed Footways and Kerbing; Constructing New and Surfacing Existing Macadam Footways; Surface Dressing Carriageways, and other incidental works.

Full details and Form of Tender are obtainable from the undersigned upon receipt of One Guinea, which will be refunded upon the submission of a bona-fide Tender.

Tenders to be returned in the official envelope by 2.30 p.m. on THURSDAY, 19th May, 1960.

JOHN L. BECKETT, M.I.C.E.,
City Surveyor.

Town Hall,
Leicester.

KIRKBY-IN-ASHFIELD URBAN DISTRICT COUNCIL.

RECONSTRUCTION OF SEWAGE DISPOSAL WORKS.

CONTRACT K.3.

TENDERS are invited for the ABOVE WORK, which includes 14 Circular Tanks in Reinforced Concrete, each 36ft. internal dia. and average 14ft. deep; Two Pumping Stations (excluding machinery; New Filter Bed 100ft. dia.; 7,500 cu. yd. of New Filter Material (including Replacement in existing Beds); 6,000 sq. yd. of Sludge Drying Beds; various Smaller Tanks and Chambers, etc.

Tendering documents (including Drawings) are obtainable from MESSRS. W. H. RADFORD AND SON, Consulting Engineers, 57 Goldsmith Street, Nottingham, on receipt of a crossed cheque for Five Guineas payable to Kirkby-in-Ashfield U.D.C. The deposit will be returnable when a bona-fide Tender has been submitted, and all documents (except a duplicate copy of the Bills of Quantities) have been returned.

Any inquiries should be made to the Consulting Engineers.

Tenders, in plain sealed envelopes endorsed "Tender for Sewage Disposal Works," are to be delivered to my Office not later than First Post on WEDNESDAY, 8th June, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

E. J. THOMAS,
Clerk of the Council.

Public Offices,
Kirkby-in-Ashfield,
Nottingham.
20th April, 1960.

MYNYDDISLWYN URBAN DISTRICT COUNCIL.

PLAYING FIELDS.

HOMEFIELDS, PENLLWYN, PONTLLANFRAITH.

FIXED-PRICE TENDERS are invited for the ABOVE-MENTIONED CONTRACT, consisting of approx. Three Acres Grading, Seeding and Drainage Works; the Erection of approx. 270yd. of Chain-link Fencing; the Laying of approx. 2,500 sq. yd. of Tarmacadam Footpaths; the Erection of Children's Playground Equipment and ancillary Works.

Specification, Bill of Quantities and Form and Conditions of Tender may be obtained from, and the Conditions of Contract and Plans inspected at, the Engineer and Surveyor's Department at these Council Offices, on payment of a deposit of £3 3s., which will be returned on receipt of a bona-fide Tender not subsequently withdrawn and the return of all documents.

Tenders, in plain sealed envelopes endorsed "Playing Fields," to be delivered to the undersigned not later than MONDAY, the 16th May, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

ARTHUR M. JAMES,
Clerk of the Council.

Council Offices,
Pontllanfraith,
Blackwood, Mon.
20th April, 1960.

SAFFRON WALDEN RURAL DISTRICT COUNCIL.

LAYING OF WATER MAINS.

FIXED-PRICE TENDERS are invited for SUPPLYING and LAYING of approx. 5,800yd. of 6in., 4in. and 3in. ASBESTOS-CEMENT WATER MAIN in the Southern Area of the Rural District.

Drawings, Specification, Bill of Quantities and Form of Tender, etc., may be obtained from the Council's Engineer and Surveyor at the address given below.

Tenders, in plain sealed envelopes marked "Water Main—Southern Area," should reach the undersigned not later than the 14th MAY, 1960.

The Council does not bind itself to accept the lowest or any Tender.

A. W. OVERALL,
Clerk to the Council.

Council Offices,
Debden Road,
Saffron Walden,
Essex.
20th April, 1960.

BLYTH RURAL DISTRICT COUNCIL.

BENHALL WATER SUPPLY SCHEME FOR SIZEWELL ATOMIC POWER STATION.

CONTRACT B—PIPELAYING.

The Blyth Rural District Council invites TENDERS from public works contractors for the LAYING of approx. two miles of 9in. dia. SPUN-IRON MAINS, $2\frac{1}{2}$ miles of 10in. dia. ASBESTOS-CEMENT MAINS, and $4\frac{1}{2}$ miles of 8in. dia. ASBESTOS-CEMENT MAINS.

Tender documents and Drawings may be obtained from 25th April to 4th May, 1960, at the offices of the Engineers, MESSRS. BINNIE, DEACON AND GOURLEY, Artillery House, Artillery Row, Westminster, S.W.1, on payment of a cheque for £10, made payable to the Blyth Rural District Council, which amount will only be refunded on receipt of a bona-fide Tender.

Tenders, in plain sealed envelopes endorsed "Tenders for Benhall Pipelines," must be delivered at my office before Noon on MONDAY, 16th May, 1960.

The Council do not undertake to accept the lowest or any Tender, and will not defray any expenses in connection with Tendering, but tenderers must make themselves fully acquainted with the site and conditions of work. Tenders are called for on the understanding that no Tender can be accepted unless and until Ministry approval for the scheme has been obtained.

J. L. LILLIE,
Clerk to the Rural District Council.

Council Offices,
Rendham Road,
Saxmundham,
Suffolk.

CONTRACTS

DUMFRIES COUNTY COUNCIL.

CARLISLE-GLASGOW TRUNK ROAD, A.74.

FINAL SURFACING.

TENDERS are invited for the REGULATION and FINAL SURFACING with HOT ROLLED ASPHALT of DUAL CARRIAGEWAYS, presently under construction, as FOLLOWS:

(a) Johnstonebridge to Upper Murthat, length $5\frac{1}{4}$ miles approx.
(b) Lockerbie to Dinwoodie Lodge, length 5 miles approx.

Drawings may be seen at the Office of the County Surveyor, County Buildings, Dumfries.

Forms of Tender, Conditions of Contract, Specifications and Bills of Quantities may be obtained from the undersigned on payment of a deposit of Five Guineas, returnable on receipt of a bona-fide Tender.

Sealed envelopes, marked "A.74 Final Surfacing," should be lodged with the undersigned by MONDAY, 9th May, 1960.

The lowest or any Tender may not be accepted.

LESLIE T. CARNEGIE,
County Clerk.

County Buildings,
Dumfries.
20th April, 1960.

METROPOLITAN BOROUGH OF LEWISHAM.

REFUSE STORAGE CONTAINERS.

TENDERS are invited for the SUPPLY of 100 $1\frac{1}{4}$ cu. yd. GALVANISED MILD STEEL CYLINDRICAL REFUSE STORAGE CONTAINERS and 25 LIDS.

Further particulars and Form of Tender from the BOROUGH ENGINEER, Lewisham Town Hall, Catford, London, S.E.6.

Closing date, 10 a.m., MONDAY, 30th May, 1960.

CITY OF CARLISLE.

MORTON—STREET LIGHTING—STAGE 3.

TENDERS are invited for the ABOVE. The Work comprises Supply, Erection and Wiring of 29 Group "A" and 57 Group "B" Specified Concrete Columns, complete with Lanterns and Ancillaries.

Particulars from City Surveyor, 18 Fisher Street.

Closing date, 30th MAY, 1960.

H. D. A. ROBERTSON,
Town Clerk.

FAREHAM URBAN DISTRICT COUNCIL.

PRIVATE STREET WORKS.

TENDERS invited for MAKING-UP FOLLOWING PRIVATE STREETS at Portchester: Alton Grove, The Beachway, Lansdowne and Lonsdale Avenues, Merton Crescent and Roman Grove (part); total length approx. 1,000yd., involving Construction of Surface Water Drainage, Kerb and Channel, Carriageway Shaping with Tarmacadam Surfacing, Footpaths surfaced with Tarmacadam, Verges, and other incidental works.

Plans may be inspected, and Tender documents obtained from Engineer and Surveyor, Westbury Manor, West Street, Fareham, Hants., on payment of deposit of £2, refundable on receipt of bona-fide Tender.

Form of Tender (in envelope provided) to me by Noon on 26th MAY, 1960; other documents to Engineer and Surveyor (in envelope provided) by same date.

The Council do not bind themselves to accept the lowest or any Tender.

B. W. RANDS,
Clerk to the Council.

Merton,
5 Grove Road,
Fareham, Hants.

BEESTON AND STAPLEFORD URBAN DISTRICT COUNCIL.

BEESTON SEWAGE DISPOSAL WORKS EXTENSIONS.

GENERAL CONTRACT.

TENDERS are invited from responsible and experienced contractors, for the ABOVE CONTRACT, for EXTENSIONS to the Beeston Sewage Disposal Works, comprising the FOLLOWING:

Detritus Channels and Screening Chambers; Storm Water Tanks; Alterations to existing Tanks and Filters; Humus Tanks; Sludge Digestion Tanks and Pumping Stations; Sludge Drying Beds; Site Works, Roadways, etc.

The Contract Drawings, Specifications and Bills of Quantity can be inspected at the Offices of the Council's Consulting Engineers, MESSRS. ELLIOTT AND BROWN, Stanley House, Pelham Road, Nottingham, on and after MONDAY, 25th April, 1960, and copies of the Specification and Bills of Quantity can be obtained from them on deposit of Five Guineas (by cheque payable to the Beeston and Stapleford U.D.C.), which will be refunded on receipt of a bona-fide Tender not afterwards withdrawn, and the return of all documents loaned the contractor for the purpose of making-up his Tender.

Applications for Tender documents from contractors who have not previously carried out work under the Engineers should be accompanied by a list of similar work carried out, together with names and addresses of the responsible Engineers to whom reference can be made.

Sealed Tenders endorsed "Tender for Beeston Sewage Works," are to be delivered to the undersigned not later than Noon on MONDAY, 23rd May, 1960.

The lowest or any Tender will not necessarily be accepted.

H. D. JEFFRIES,
Clerk of the Council.

Town Hall,
Beeston,
Nottingham.

CHESTERTON RURAL DISTRICT COUNCIL.

TEVERSHAM—HOUSING SITE.

TENDERS are invited for the CONSTRUCTION of approx. 1,000 sq. yd. of TARMACADAM FOOTPATH and other incidental Works.

The Specification, Bills of Quantities and Form of Tender may be obtained from the Engineer and Surveyor, on payment of £2 2s. deposit. The deposit will be refunded on receipt of a bona-fide Tender (not subsequently withdrawn) and the return of all documents.

Sealed Tenders must be returned to the undersigned not later than 9 a.m. on TUESDAY, 17th May, 1960.

The Council does not bind itself to accept the lowest or any Tender.

W. H. HAYWARD,
Clerk of the Council.

County Hall,
Hobson Street,
Cambridge.

CONTRACTS

PEMBROKESHIRE COUNTY COUNCIL.

ROADS AND BRIDGES DEPARTMENT.

MACHINE-LAID ROAD SURFACING, 1960-61.

TENDERS are invited for the FOLLOWING:
(a) The Supply of Coated Material.
(b) The Hire of a Barber-Greene Machine.
(c) The Supply and Laying of Bituminous Macadam, totalling some 213,000 sq. yd. divided between 39 sites on Trunk and County Roads; and
(d) The Supplying and Laying of approx. 5,300 sq. yd. of Two-course Hot Rolled Asphalt on one site.

Contract documents may be obtained on application to the County Surveyor, County Offices, Haverfordwest.

Tenders to be submitted to the undersigned on or before the 12th MAY, 1960.

H. LOUIS UNDERWOOD,
Clerk of the County Council.

County Offices,
Haverfordwest.
April, 1960.

COUNTY BOROUGH OF BURY.

PORTABLE AIR COMPRESSOR.

TENDERS invited for SUPPLY and DELIVERY of one new BROOMWADE W.R.175 WHIRLWIND UNIFLOW PORTABLE AIR COMPRESSOR.

Details from Borough Engineer, Town Hall, Bury.

Tenders, enclosed in official envelope provided, must reach me by 11th MAY, 1960.

EDWARD S. SMITH,
Town Clerk.

Town Hall,
Bury.
19th April, 1960.

BOROUGH OF BOSTON.

SURFACE DRESSING.

TENDERS are invited for the SURFACE DRESSING of ROADS, comprising approx. 125,000 super. yd.

A Specification and particulars may be obtained from the Borough Surveyor, Municipal Buildings, Boston, Lincs. Tenders, in plain sealed envelopes endorsed "Surface Dressing," must be received by the undersigned not later than the 9th May, 1960.

The Corporation do not bind themselves to accept the lowest or any Tender.

C. L. HOFFROCK GRIFFITHS,
Town Clerk.

Municipal Buildings,
Boston, Lincs.

BOROUGH OF WIDNES.

PAINTING OF SCHOOL PREMISES.

FIXED-PRICE TENDERS are invited for PAINTING and DECORATING VARIOUS SCHOOL PREMISES in the Borough.

Specification and Form of Tender obtainable from the Borough Architect, Brendan House, Widnes Road, Widnes.

Tenders, in special envelope provided, must be delivered to the undersigned not later than 10 a.m., MONDAY, 6th June, 1960.

The Council does not bind itself to accept the lowest or any Tender.

FRANK HOWARTH,
Town Clerk.

Town Hall,
Widnes.
20th April, 1960.

BENFLEET URBAN DISTRICT COUNCIL.

GROUP "A" AND GROUP "B" ELECTRIC STREET LIGHTING.

Street lighting contractors who wish to TENDER for the INSTALLATION of 1½ Miles of GROUP "A" STREET LIGHTING at RAYLEIGH ROAD, Thundersley, and ¼ Mile GROUP "B" STREET LIGHTING at HIGH STREET, Hadleigh, are invited to make application to the Engineer and Surveyor at these Offices not later than Noon on MONDAY, 9th May, 1960, enclosing a deposit of £1, which will be returned on receipt of a bona-fide Tender.

As soon as possible after the receipt of the deposit, copies of the Form of Tender and all necessary documents will be forwarded to the applicants, stating the closing date for the receipt of Tenders.

The Council do not bind themselves to accept the lowest or any Tender.

D. GRUDGINGS,
Clerk of the Council.

Council Offices,
Thundersley,
Essex.

LLEYN RURAL DISTRICT COUNCIL.

TO CONTRACTORS.

SEWERAGE AND SEWAGE DISPOSAL WORKS AT RHYDYCLAFDY, CAERNARVONSHIRE.

The Lleyn Rural District Council invite FIRM-PRICE TENDERS from competent contractors for LAYING approx. 455 lin. yd. of 6in. dia. STONEWARE PIPE SEWERS; 225 lin. yd. of 6in. dia. CAST-IRON PIPE SEWERS; 139 lin. yd. of 4in. dia. CAST-IRON RISING MAIN; also the Construction of Manholes and incidental works comprising of Pumping Station and Sewage Disposal Works, in accordance with Plans, Specification and Quantities prepared by the Council's Engineer, MR. D. LLOYD JONES.

Form of Tender, Plans, Specification and Bills of Quantities may be obtained from the undersigned on payment of £3 3s., which will be refunded on receipt of a bona-fide Tender and the return of all documents.

Sealed Tenders, on the approved form endorsed "Rhydyclafdy Sewerage Scheme," are to be delivered to me at my Office not later than 12 Noon on the 11th MAY, 1960.

The Council do not bind themselves to accept the lowest or any Tender, and any Tender accepted by the Council will be subject to the subsequent approval of the Ministry of Housing and Local Government.

R. G. ROBERTS,
Clerk of the Council.

Metro Buildings,
Pwllheli.

EDINBURGH CORPORATION.

REBUILDING OF TEMPORARY HOUSING AREAS.

The Corporation contemplate REPLACING TEMPORARY HOUSES on a Demolish-and-Redevelop Basis. Contractors desirous of being considered for schemes dealing with a complete site as one Contract are invited to submit their names for inclusion in a list of firms to whom an outline of the scheme will be sent.

Application should be made by letter, addressed to the CITY ARCHITECT, City Chambers, Edinburgh, 1.

The first list of applicants will close on Monday, 2nd May, 1960, and a request for inclusion in a final list must be received by MONDAY, 16th May, 1960.

CONTRACTS

BOROUGH OF CAERNARVON.

ABER BRIDGE RECONSTRUCTION.

TENDERS are invited from firms experienced in bridge reconstruction, for the STRENGTHENING and IMPROVEMENT of ABER SWING BRIDGE and the Approach Roads to the Bridge. The Bridge, which is of steel construction, carries one line of road traffic and is about 250ft. long, the swing span being about 150ft. long.

The works include the Replacement and Strengthening by Welding of certain bridge members, the Provision of Timber Footways, Steel Road Deck and Macadam Surfacing, the Replacement in Cast-iron of the Roller Paths and Rollers, Alterations to the Operating Mechanisms, and the Improvement of the Approach Roads.

Instructions to persons tendering, and documents, may be obtained from the Consulting Engineers, F. R. BULLEN AND PARTNERS, Dacre House, Dean Farrar Street, Westminster, S.W.1, on payment of £5 5s. deposit, returnable upon receipt of a bona-fide Tender.

Applications for Tender documents should be made to the Consulting Engineers by 10th MAY, 1960.

On and after 2nd May, 1960, Drawings may be inspected at the Offices of the Borough Engineer and Surveyor, Swyddfa'r Dref, High Street, Caernarvon, or at the Offices of F. R. BULLEN AND PARTNERS, either in London or at 42 Victoria Road, Darlington, Co. Durham, without payment.

Tenders are to be delivered to the undersigned, in a plain sealed envelope, before 12 o'clock Noon on 14th JUNE, 1960.

J. O. SMITH,
Town Clerk,
Borough of Caernarvon.

Town Clerk's Office,
Briggs Chambers,
Caernarvon.

POPLAR BOROUGH COUNCIL

TENDER FOR TOWELS.

TENDERS are invited for the SUPPLY of 200 Dozen TURKISH TOWELS for the Baths Establishments.

Full particulars can be obtained from the TOWN CLERK, Poplar Town Hall, Bow Road, E.3, to whom Tenders must be delivered not later than 7 p.m. on WEDNESDAY, 18th May, 1960.

HORSHAM URBAN DISTRICT COUNCIL

SURFACE WATER DIVERSION—HORSHAM PARK.

The Council will shortly be inviting TENDERS for the ABOVE CONTRACT, which comprises the CONSTRUCTION of 343yd. of 27in. dia. CONCRETE SURFACE WATER SEWER, together with certain ancillary works.

Contractors who wish to be included on the list of tenderers must notify the Surveyor to the Council by 10th MAY, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

S. ASHTON STRAY,
Clerk of the Council.

Council Offices,
Horsham Park,
Horsham.

BANSTEAD URBAN DISTRICT COUNCIL.

DEMOLITION OF MILITARY BLOCKHOUSES, AIR RAID SHELTERS, STATIC WATER TANK BASES, ETC.

TENDERS are invited for the DEMOLITION and CLEARANCE of the ABOVE TYPE DEFENCE WORK on VARIOUS SITES within the Urban District.

Conditions of Contract and Drawings may be inspected at, and Specification, Schedule of Works and Tender Form may be obtained from, the Engineer and Surveyor, The Council House, Brighton Road, Banstead, upon payment of a deposit of £2 2s., returnable on receipt of a bona-fide Tender not subsequently withdrawn.

Tenders, in plain sealed envelopes endorsed "Demolition of Blockhouses, etc.," and not bearing any name or mark indicating the sender, must be returned to the undersigned not later than WEDNESDAY, 25th May, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

F. L. SHAW,
Clerk of the Council.

The Council House,
Brighton Road,
Banstead, Surrey.

BANSTEAD URBAN DISTRICT COUNCIL.

COLD ASPHALT SURFACING SECTIONS OF A.217 BRIGHTON ROAD AT BURGH HEATH AND AT LOWER KINGSWOOD.

TENDERS are invited for the SUPPLY and LAYING BY MACHINE SPREADER of approx. 320 tons of FINE COLD ASPHALT SLAG AGGREGATE, with the necessary quantity of Precoated Granite Chippings, all in accordance with B.S.1690.

Tender documents may be obtained from, and Conditions of Contract may be inspected at the Office of the Engineer and Surveyor, Council Offices, Brighton Road, Banstead, Surrey, on payment of a deposit of £2 2s., which will be returned on receipt of a bona-fide Tender not subsequently withdrawn.

Tenders, in plain sealed envelopes endorsed "Tender for Resurfacing—Brighton Road," must be returned to the undersigned not later than 17th MAY, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

F. L. SHAW,
Clerk of the Council.

The Council House,
Brighton Road,
Banstead.

URBAN DISTRICT COUNCIL OF BEDWORTH.

CONSTRUCTION OF FOUL SEWER TO SERVE MOUNT PLEASANT ESTATE, BEDWORTH.

TENDERS are invited from experienced contractors for the EXCAVATING FOR and LAYING of approx. 850 lin. yd. of 12in. dia. SALT GLAZED STONEWARE FOUL SEWER and approx. 45 lin. yd. of 12in. dia. CLASS "B" SPUN-IRON FOUL SEWER, including Construction of 13 Brickwork Manholes. Maximum depth of excavation 13ft.

Conditions of Contract, Bill of Quantities and Drawings obtainable from the Engineer and Surveyor, Council Offices, High Street, Bedworth, near Nuneaton, upon payment of Two Guineas, which will be returned on receipt of a bona-fide Tender and the return of all documents.

Sealed Tenders, in the envelope provided, to be delivered to the undersigned not later than 9 a.m. on THURSDAY, 26th May, 1960.

Th Council does not bind itself to accept the lowest or any Tender.

S. G. DEEMING,
Clerk of the Council.

CONTRACTS

COUNTY OF CORNWALL.

PERRANPORTH COUNTY PRIMARY SCHOOL.

Notice is hereby given of the intention to LET SEPARATELY the SUB-CONTRACTS for the FOLLOWING:
(a) Structural Steelwork.
(b) Metal Windows and Doors.
(c) Electrical Services.

Applications are invited for permission to submit FIXED-PRICE TENDERS for these Sub-contracts, and should be made to the County Architect, County Hall, Truro, not later than SATURDAY, 14th May, 1960, from which a selected number of firms will be invited to tender. The closing date for receipt of Tenders will be notified when the documents are dispatched.

The lowest or any Tender will not necessarily be accepted, nor will the County Council pay to contractors any fees or expenses incurred in the preparation of Tenders.

E. T. VERGER,
Clerk of the County Council.

County Hall,
Truro.
21st April, 1960.

COUNTY BOROUGH OF BURY.

TENDERS invited for SUPPLY, DELIVERY and LAYING of approx. 6,800 sq. yd. of HOT ROLLED ASPHALT SURFACING.

Details from Borough Engineer, Town Hall, Bury.

Tenders, enclosed in official envelope provided, must reach me by 11th MAY, 1960.

EDWARD S. SMITH,
Town Clerk.

Town Hall,
Bury.
20th April, 1960.

BOROUGH OF WREXHAM.

ST. MARK'S CAR PARK.

FIXED-PRICE TENDERS are invited for the FOLLOWING:
(a) Construction of Car Park, including Pitched Foundation, Surface Water Drainage, Fencing, and ancillary works.
(b) Dense Tar Surfacing in Two-course Work (approx. area 4,300 sq. yd.).

Drawings and General Conditions of Contract may be inspected, and Specification and Bills of Quantities obtained from the Borough Engineer and Surveyor, 31 Chester Street, Wrexham, on payment of a deposit of £2 2s. for each Contract, refundable on receipt of bona-fide Tender(s).

Tenders, in the sealed envelope(s) provided, must be delivered to the undersigned not later than 12 Noon, MONDAY, 23rd May, 1960.

Th Council does not bind itself to accept the lowest or any Tender.

PHILIP J. WALTERS,
Town Clerk.

Guildhall,
Wrexham.
April, 1960.

CITY AND COUNTY OF NEWCASTLE UPON TYNE.

SUPPLY OF SITE INVESTIGATION EQUIPMENT.

TENDERS, which must be returned not later than 10 a.m., TUESDAY, 10th May, 1960, are invited for the SUPPLY of SHELL and AUGER EQUIPMENT, CASING, WINCH SET and SHEAR LEGS, to sink 8in. nominal dia. Boreholes, and 4in. nominal dia. Soil Sampling Equipment.

Schedule, etc., from CITY ENGINEER, Town Hall, Newcastle upon Tyne, 1.

URBAN DISTRICT COUNCIL OF TYLDESLEY.

STREET LIGHTING.

TENDERS are invited for the SUPPLY and ERECTION of 52 CLASS "B" and Two CLASS "A" SODIUM LAMPS with Concrete Columns.

Forms of Tender and Conditions of Contract may be obtained from the Engineer and Surveyor, P.O. Box No. 7, Town Hall, Tyldesley, on receipt of a deposit of One Guinea, which will be returned on receipt of a bona-fide Tender not subsequently withdrawn.

Tenders, in plain sealed envelopes endorsed "Street Lighting," to be returned to the undersigned not later than 14th MAY, 1960.

The lowest or any Tender will not necessarily be accepted.

RICHARD F. WILSON,
Clerk of the Council.

Town Hall,
Tyldesley,
Lancs.

WORTLEY RURAL DISTRICT COUNCIL.

TWO REFUSE COLLECTION VEHICLES; PROTECTIVE CLOTHING.

TENDERS are invited for the SUPPLY and DELIVERY of the FOLLOWING:
(a) Two Side-loading Petrol-driven Forward Control Refuse Collection Vehicles of approx. 10 cu. yd. body capacity, with Double Cab.
(b) 96 Sets of Overalls.
(c) 48 Overcoats.

Additional particulars may be obtained from the Chief Public Health Inspector, Council Offices, Grenoside, near Sheffield.

Sealed Tenders, endorsed "Refuse Collection Vehicles" or "Protective Clothing," are to be delivered to the undersigned not later than 12 Noon on SATURDAY, 21st May, 1960.

ADRIAN M. KELLY,
Clerk of the Council.

Council Offices,
Grenoside,
Near Sheffield.

ALTON RURAL DISTRICT COUNCIL.

SUTTON FIELD, WHITEHILL, HOUSING SITE.

TENDERS are invited for the CONSTRUCTION of ROAD, SEWERS and other ancillary works on the ABOVE SITE.

Drawings may be inspected at the Office of the Engineer and Surveyor, from whom the necessary documents may be obtained on payment of a deposit of Three Guineas, which will be refunded on receipt of a bona-fide Tender not subsequently withdrawn, and on return of the documents.

Tenders, in plain sealed envelopes endorsed "Whitehill Housing Site—Site Works," must be delivered to the undersigned not later than WEDNESDAY, 1st June, 1960.

The Council does not bind itself to accept the lowest or any Tender.

R. J. HOLDEN,
Clerk of the Council.

Barton End,
Alton, Hants.
20th April, 1960.

CONTRACTS

DERBYSHIRE COUNTY COUNCIL.

BRIDGES AND HIGHWAYS DEPARTMENT.

LONDON-CARLISLE TRUNK ROAD, A.6.

IMPROVEMENT FROM CROMFORD TO MASSON MILLS.

TENDERS are invited for the CONSTRUCTION of a 33ft. CARRIAGEWAY from Cromford Cross-roads northwards towards Masson Mills. Works comprise 14,300 cu. yd. Rock Excavation; 4,500 cu. yd. Earth Excavation; Tree Felling; Drainage; Premixed Water-bound Macadam Foundation; 4,900 sq. yd. 3in. Bitumen Macadam Base Course; 1,000 lin. yd. Kerbing; Fench and Retaining Walls.

Plans may be seen, and Form of Tender obtained from County Surveyor, County Offices, Matlock, Derbyshire, on payment of £5 deposit, cheques payable to Derbyshire County Council; deposit re unded on signing Contract or notification of non-acceptance.

Tenders, in plain sealed envelopes endorsed "Cromford Impt., B. and H.," to be delivered to Clerk of the County Council, County Offices, Matlock, Derbyshire, by MONDAY, 23rd May, 1960.

The Council does not bind itself to accept the lowest or any Tender.

S. MEHEW,
County Surveyor.

LLANGOLLEN URBAN DISTRICT COUNCIL.

LLANGOLLEN WATER SUPPLY.

CONTRACT NO. 1.

The Llangollen Urban District Council invite FIXED-PRICE TENDERS from civil engineering contractors for the CONSTRUCTION of SEDIMENTATION TANKS, the PROVISION and LAYING of approx. 900yd. of 6in. and 8in. dia. CONCRETE-LINED SPUN-IRON MAINS, and other incidental works in and near Llangollen, Denbighshire.

Contractors wishing to submit a TENDER should apply in writing to the Consulting Engineers, MESSRS. RICHARDS AND DUMBLETON, Cornwall Buildings, 45 Newhall Street, Birmingham, 3, and Greenways, Portmadoc, Caernarvonshire, from whom copies of the Specification, Bills of Quantities and Form of Tender may be obtained on and after FRIDAY, the 29th April, 1960, on payment of a deposit of Three Pounds (£3), made payable to the Llangollen Urban District Council.

Deposits will be returned to contractors who submit bona-fide Tenders not subsequently withdrawn, and accompanied by priced Bills of Quantities, and the return of any Drawings supplied.

Drawings, Specification and Bills of Quantities may be inspected at the Office of the undersigned, or at the offices of the Consulting Engineers, during usual office hours on and after FRIDAY, the 29th April, 1960.

Sealed Tenders, on the official Form of Tender, and enclosed in the envelope provided, to be delivered to the undersigned not later than 12 Noon on FRIDAY, the 27th May, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

E. ELLIS ROBERTS,
Clerk of the Council.

Town Hall,
Llangollen,
Denbighshire.
21st April, 1960.

BROMSGROVE URBAN DISTRICT COUNCIL.

SURFACE WATER SEWER—NORTH ROAD AND WEST ROAD, BROMSGROVE.

The Council invite TENDERS for the LAYING of a SURFACE WATER SEWER in North Road and West Road, Bromsgrove, together with ancillary works.

The approx. length of Sewer is as follows: 195 lin. yd. of 6in. Surface Water Sewer; 81 lin. yd. of 9in. Surface Water Sewer.

Bills of Quantities and Specifications may be obtained from the Engineer and Surveyor, Council House, Bromsgrove, on deposit of £2 2s. The deposits will be refunded on receipt of a bona-fide Tender and the return of all documents.

General Conditions of Contract and Drawings may be inspected at the above Office.

Tenders, in plain sealed envelopes endorsed "Surface Water Sewer—North Road and West Road," are to be delivered to the undersigned not later than Noon on FRIDAY, 20th May, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

F. A. JESSOP,
Clerk to the Council.

Council House,
Bromsgrove.
20th April, 1960.

WHITCHURCH URBAN DISTRICT COUNCIL.

SMALLBROOK BRIDGE RECONSTRUCTION.

TENDERS are invited for the CONSTRUCTION of TWO REINFORCED CONCRETE RETAINING WALLS, together with incidental works, including Carriageway and Drainage, etc.

Drawings, Specification, Bill of Quantities and Form of Tender may be obtained from the Engineer and Surveyor, Pauls Moss, Dodington, Whitchurch, on payment of a sum of Three Guineas, which will be refunded on receipt of a bona-fide Tender and the return of all documents.

Tenders, in plain sealed envelopes endorsed "Tender for Smallbrook Bridge Reconstruction," should be delivered to the undersigned not later than 12 Noon on TUESDAY, 31st May, 1960.

FRANK CLAYTON,
Clerk of the Council.

Council Offices,
Pauls Moss,
Dodington,
Whitchurch,
Shropshire.
21st April, 1960.

EAST SUFFOLK AND NORFOLK RIVER BOARD.

HIRE OF PLANT.

TENDERS are invited for the HIRE of a TOWER CRANE, for use at Aldeburgh, Suffolk, for an estimated period of three months. The lib is required to have a lifting capacity of approx. 1 ton at approx. 100ft. radius at a low level.

Further particulars and Tender Forms may be had on application to the Board's Chief Engineer, K. E. COTTON, M.B.E., and returned to me not later than 9 a.m. on the 12th MAY, 1960.

S. VINCENT ELLIS,
Clerk of the Board.

The Cedars,
Albemarle Road,
Norwich.
14th April, 1960.

CONTRACTS

ANGUS COUNTY COUNCIL.

AUCHTERHOUSE DRAINAGE.

The County Council will shortly issue Contract documents for LAYING approx. 1,300yd. 9in. and 6in. dia. F.C. PIPES with PRECAST CONCRETE MANHOLES, and the CONSTRUCTION of a SEWAGE DISPOSAL WORKS.

Contractors wishing to TENDER are invited to apply to the County Engineer, County Buildings, Forfar, before SATURDAY, 30th April, 1960.

IAN A. MACKNIGHT,
County Clerk.

County Buildings,
Forfar.

DURHAM COUNTY COUNCIL.

ANNUAL CONTRACTS.

TENDERS are invited for the SUPPLY of MOTOR FUEL, BURN NG OILS, LUBRICATING OILS, GREASES, MOTOR VEHICLE BATTERIES, RUBBER TYRES, RUBBER TUBES, RUBBER TYRE REMOULDS, and SPARKING PLUGS during the year ending 30th June, 1961.

Forms of Tender, General Conditions, Special Conditions and Specification for any of the above may be obtained from the County Engineer and Surveyor, Aykley Heads, Durham.

Tenders, in plain sealed envelopes endorsed "Tender for ——," are to be delivered to the undersigned not later than Noon on FRIDAY, 13th May, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

J. K. HOPE,
Clerk of the County Council.

Shire Hall,
Durham.

COUNTY BOROUGH OF NORTHAMPTON.

(AMENDED ADVERTISEMENT.)

TENDERS are invited for the CONSTRUCTION of approx. 1,500yd. of FOUL and SURFACE WATER SEWERS 6in. to 30in. in dia., together with RIVER OUTFALL, MANHOLES, and ancillary works, in the Central Redevelopment Area.

Contractors wishing to tender should apply to the Borough Engineer, Guildhall, Northampton, enclosing crossed cheque (payable to Northampton Corporation) for £2 2s. This sum will be returned if a bona-fide Tender is received by 10 a.m. on 28th MAY, 1960, and not subsequently withdrawn.

C. E. VIVIAN ROWE,
Town Clerk.

COUNTY BOROUGH OF NORTHAMPTON.

TENDERS are invited for the CONSTRUCTION of approx. 320 lin. yd. of DUAL CARRIAGEWAY ROAD with Concrete Foundation and Asphalt Surfacing, comprising the Second Section of the Link Road between Bridge Street, A.50, and Black Lion Hill, A.45, together with incidental works.

Contractors wishing to tender should apply to the Borough Engineer, Guildhall, Northampton, enclosing crossed cheque (payable to Northampton Corporation) for £2 2s. This sum will be returned if a bona-fide Tender is received by 10 a.m. on 28th MAY, 1960, and not subsequently withdrawn.

C. E. VIVIAN ROWE,
Town Clerk.

BOROUGH OF MAIDSTONE.

ALLINGTON SEWAGE PUMPING STATION.

WM18 CONTRACT M13.

FIRM-PRICE TENDERS are invited for the SUPPLY and ERECTION at the Allington Sewage Pumping Station of TWO "NO-CHOKE" TWO-SPEED ELECTRICALLY DRIVEN PUMPING SETS rated at 5 to 7 m.g.d. and 9 to 11 m.g.d., respectively.

Particulars and Specifications obtainable from, and Plans inspected at, the Offices of the Consulting Engineers, MESSRS. HOWARD HUMPHREYS AND SONS, Victoria Station House, Victoria Street, Westminster, S.W.1, on and from MONDAY, 2nd May, 1960, until FRIDAY, 20th May, 1960, upon payment of a deposit of Five Guineas made payable to the Corporation, returnable for bona-fide Tender not subsequently withdrawn.

No Tender considered unless on the official form and delivered to the undersigned, in plain sealed envelopes endorsed "Tender for Pumping Plant—Contract M13," but bearing no indication of the sender, not later than MONDAY, 13th June, 1960.

The Council do not bind themselves to accept any Tender.

T. SCHOLES.

13 Tonbridge Road,
Maidstone, Kent.
April, 1960.

BOROUGH OF MALDON.

TENDERS are invited for the EXTERNAL PAINTING of the FOLLOWING COUNCIL DWELLINGS:—

CONTRACT D(1).—St. Giles Crescent, Maldon—36 Dwellings.

CONTRACT D(2).—Orchard Road, Maldon, and St. Peter's Avenue, Maldon—66 Dwellings.

Form of Tender, Specifications, etc., obtainable from the Borough Engineer, Market Hill, Maldon, on receipt of a deposit of £2 2s., returnable on receipt of a bona-fide Tender, not subsequently withdrawn, or on return of the documents. Tenders to reach the undersigned not later than First Post on 16th MAY, 1960, in plain sealed envelopes, marked "Tender for Painting."

The Council will not be bound to accept the lowest or any Tender.

K. C. ROBERTSON,
Town Clerk.

Municipal Offices,
Maldon, Essex.

SOUTH WESTMORLAND RURAL DISTRICT COUNCIL.

TENDERS are invited, on a Fixed-price Basis, for the CONSTRUCTION of about 900yd. of 6in. SEWERS and a SMALL SEWAGE DISPOSAL WORKS at Grayrigg, near Kendal.

Forms of Tender and other particulars can be obtained from the Council's Engineer at Stricklandgate House, Kendal, upon payment of a fee of £3 3s., which will be refunded upon receipt of a bona-fide Tender, and the Drawings can be inspected at his Office.

Tenders to be delivered in plain sealed envelopes marked "Grayrigg Works," to the undersigned not later than 23rd MAY, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

H. SAUL,
Clerk of the Council.

Stricklandgate House,
Kendal,
Westmorland.
26th April, 1960.

CONTRACTS

BOROUGH OF SHREWSBURY.

DITHERINGTON VILLAGE REDEVELOPMENT.
PART II—ROADS AND SEWERS.

TENDERS are invited for the ABOVE WORKS comprising the following approx. quantities:—

Bituminous Roads, 4,000 sq. yd.
Foul and Surface Water Sewers, 6in. and 9in. dia. 1,350 lin. yd.

Tender documents obtainable from Borough Surveyor Guildhall, Shrewsbury, on receipt of Two Guineas deposit (cheques payable to Shrewsbury Corporation).

Tenders, in sealed envelope provided, to reach undersigned not later than Noon on WEDNESDAY 25th May.

S. R. H. LOXTON,
Town Clerk.

Guildhall,
Shrewsbury.

BOROUGH OF PONTEFRACT.

TENDERS are invited from contractors secialising in this class of work for LAYING ANY or ALL of the FOLLOWING:—

(a) Approx. 7,000 sq. yd. of $1\frac{1}{4}$in. Hot Rolled Asphalt to B.S.594.
(b) Approx. 5,000 sq. yd. of $\frac{3}{4}$in. Cold Asphalt to B.S.1690.
(c) Surface Dressing County and District Roads to a total area of approx. 60,000 sq. yd.

Specifications and Forms of Tender may be obtained upon application to the Borough Engineer.

A. F. RICHMOND, A.M.I.C.E.,
Borough Engineer.

Municipal Offices,
Pontefract,
Yorkshire.
April, 1960.

CITY OF MANCHESTER.

TENDERS invited for MINOR ALTERATIONS at GREEN END PRIMARY SCHOOL, LEVENSHULME. Specification and Drawings from CITY ARCHITECT, P.O. Box 488, Town Hall. Tenders returnable by MAY 11th.

CITY OF MANCHESTER.

TENDERS invited for the ELECTRICAL INSTALLATION to ROYLE GREEN INFANTS' SCHOOL, NORTHENDEN. Specification and Drawings from CITY ARCHITECT, P.O. Box 488, Town Hall. Tenders returnable by MAY 25th.

CITY OF MANCHESTER.

CLAYTON BROOK, NEAR CRABTREE LANE, CLAYTON—CULVERTING.

TENDERS are invited for the CONSTRUCTION of 70 lin. yd. of 36in. dia. CONCRETE TUBE CULVERT and One PRECAST CONCRETE MANHOLE.

Tender documents, returnable by 16th MAY, 1960, obtainable from the CITY SURVEYOR (Room 223), Town Hall, Manchester, 2.

HEBBURN URBAN DISTRICT COUNCIL.

ERECTION OF 40 MAISONNETTES—STATION ROAD AREA, HEBBURN.

SUB-CONTRACTORS.

The Council propose to erect the above by direct labour, and contractors wishing to TENDER for the FOLLOWING SUB-CONTRACTS should submit their names to the Engineer and Surveyor not later than 5th MAY, 1960, together with a cheque for Three Guineas, payabe to the Hebburn U.D.C., as deposits, which will be returned upon receipt of a bona-fide Tender:—

(1) Plumbing.
(2) Electrical Installation.
(3) Plastering.

Specification and Form of Tender will be forwarded to the contractors, with date when Tenders should be returned.

Drawings and Conditions of Contract may be seen at the Office of the Engineer and Surveyor, Council Offices, Argyle Street, Hebburn.

The Council does not bind itself to accept the lowest or any Tender.

J. R. PASSEY,
Clerk to the Council.

Council Offices,
Argyle Street,
Hebburn, Co. Durham.
20th April, 1960.

DURSLEY RURAL DISTRICT COUNCIL.

COMPREHENSIVE SCHEME OF WATER SUPPLY—CONTRACT NO. 4—WITHIN THE PARISHES OF CAM AND COALEY.

The Council invite TENDERS on a fixed-price basis from experienced civil engineering contractors for the FOLLOWING WORKS of WATER SUPPLY:—

(1) Construction of a 40,000-gallon Concrete Reservoir.
(2) Construction of a 5,000-gallon Concrete Break Pressure Tank.
(3) The Provision and Laying of Spun-Iron Water Mains, 200 lin. yd. 6in. dia.
(4) The Provision and Laying of Asbestos-Cement Pressure Mains:—
    (a) 2,340 lin. yd. 6in. dia.
    (b) 3,780 lin. yd. 4in. dia.
    (c) 3,300 lin. yd. 3in. dia.
(5) The Provision and Laying of Galvanised Steel Mains of 2in. and $1\frac{1}{2}$in. dia., 850 lin. yd.
(6) The Provision and Laying of new Service Connections, together with Disconnection of existing Service Connections from existing Mains and Reconnection to new Mains, together with ancillary works.

Contractors desirous of tendering are requested to advise the Council's Consulting Engineers, Messrs. T. WARD WHITFIELD AND SON, 54 Stallard Street, Trowbridge, Wilts., not later than the 14th MAY, 1960, after which they will receive full partiuclars. The applications must be accompanied by a deposit of Five Guineas, which will be returned after receipt of a bona-fide Tender.

Tenders, in plain sealed envelopes, endorsed "Tender for Water Works," must reach the undersigned by a date to be given by the Engineers.

The Council do not bind themselves to accept the lowest or any Tender.

H. A. PATE,
Clerk of the Council.

Council Offices,
Kingshill,
Dursley, Glos.
20th April, 1960.

FLINTSHIRE EDUCATION COMMITTEE.

TENDERS are invited for the SUPPLY and DELIVERY of CLEANING MATERIALS for the SCHOOLS in the County. Full particulars and Form of Tender may be obtained on application to the DIRECTOR OF EDUCATION, County Education Offices, Mold.

CONTRACTS

CHELMSFORD BOROUGH COUNCIL
as Agents for
CHELMSFORD BOROUGH AND RURAL DISTRICT JOINT SEWERAGE COMMITTEE.

The above Council invite TENDERS for the SUPPLY of approx. 15,000 cu. yd. of BACTERIA BED MEDIA complying with B.S. 1438/1948.

Full details may be obtained, upon written application, from the Surveyor to the Council, MR. E. P. ALLEN, Municipal Offices, Coval Lane, Chelmsford, Essex.

Tenders for the above shall be delivered, in the endorsed envelopes provided, not later than 12 Noon on MONDAY, 6th June, 1960.

The Committee do not bind themselves to accept the lowest or any Tender.

B. A. FRANCIS,
Town Clerk.

BOROUGH OF SALE.

SURFACE DRESSING.

TENDERS are invited for the SURFACE DRESSING of approx. 42,000 sq. yd. of ROADS in the Borough.

Specification, Bill of Quantities and Form of Tender obtainable on payment of a deposit of £2 2s., from the Borough Engineer's Office, Town Hall, Sale, where the General Conditions of Contract may be inspected.

No Tender will be received except in the plain sealed envelope provided, endorsed "Tender—Surface Dressing," but devoid of any name or mark indicating the sender, so as to reach the undersigned not later than 10 a.m. on MONDAY, 16th May, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

BERTRAM FINCH,
Town Clerk.

Town Hall,
Sale.

BOROUGH OF BEXHILL.

LINK ROAD—GLOVERS LANE/NORTH ROAD.

FIXED-PRICE TENDERS are invited for the CONSTRUCTION of REINFORCED CONCRETE CARRIAGEWAYS, approx. length 50yd., average width 7yd., together with all Footways, Verges and Drainage.

Specification, Bills of Quantities and Form of Tender may be obtained from the Borough Surveyor, Town Hall, Bexhill, Sussex, upon receipt of a deposit of Two Guineas, which will be refunded upon receipt of a bona-fide Tender not subsequently withdrawn, and on the return of all documents supplied. Drawings and General Conditions of Contract may be inspected at the Office of the Borough Surveyor during normal working hours.

Tenders, in envelope provided, and not bearing any name or mark to indicate the sender, must be delivered to the undersigned not later than Noon on SATURDAY, 21st May, 1960.

The Council does not bind itself to accept the lowest or any Tender.

EDWARD SMITH,
Town Clerk.

Town Hall,
Bexhill.

THE URBAN DISTRICT COUNCIL OF HAVANT AND WATERLOO.

QUOTATIONS are invited for the SUPPLY (including or excluding Erection and Glazing) of THREE ENCLOSED TYPE BUS PASSENGER SHELTERS, size approx. 15ft. x 5ft.

Quotations, with full details of size and construction, together with delivery period, to be delivered to the ENGINEER AND SURVEYOR, 1 Park Road North, Havant, not later than 12 Noon on the 16th MAY, 1960.

FRIERN BARNET URBAN DISTRICT COUNCIL.

SUPPLY OF TARRED GRANITE CHIPPINGS.

TENDERS are invited for the ABOVE for SURFACE DRESSING in May, 1960.

Specification and Form of Tender, etc., may be obtained from the Engineer and Surveyor, Town Hall, N.11.

Tenders are to be delivered to the undersigned not later than 10 a.m. on MONDAY, 9th May, 1960.

R. S. CLOTHIER,
Clerk of the Council.

Town Hall,
N.11.

FOREHOE AND HENSTEAD RURAL DISTRICT COUNCIL.

WELBORNE, ETC., WATER SUPPLY.

The above-named Council invite TENDERS from responsible contractors for the PROVISION and LAYING of about 3,500yd. of 4in. and 3in. dia. SPUN-IRON PIPE WATER MAINS at Welborne.

Plans, Specifications and Bills of Quantities can be seen at the Offices of the Council's Consulting Engineers, MESSRS. ELLIOTT AND BROWN, Stanley House, Pelham Road, Nottingham, and copies of the Plan, Specification and Bill of Quantities can be obtained from them after MONDAY, 2nd May, 1960, on deposit of Five Guineas (by cheque payable to the Forehoe and Henstead R.D.C.), which will be refunded on receipt of a bona-fide Tender, not afterwards withdrawn, and the return of all documents loaned the contractor for the purpose of making up his Tender within seven days of a notice informing him of the acceptance of a Tender.

Sealed Tenders, endorsed "Welborne Water," to be delivered in a plain sealed envelope to the undersigned not later than 12 Noon on 30th MAY, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

R. F. BLAZEY,
Clerk of the Council.

Ber House,
158 Ber Street,
Norwich,
Norfolk. NOR 56B.

CUMBERLAND AND WESTMORLAND CONSTABULARY.

TENDERS are invited for the SUPPLY of UNIFORM GREATCOATS, BRITISH WARM COATS, SERGE JACKETS, SERGE TROUSERS, COSTUMES, WATERPROOF LEGGINGS, WHITE SHIRTS and COLLARS, AIR FORCE BLUE SHIRTS and COLLARS, BLACK TIES, UNIFORM CAPS, HELMETS, LEATHER GLOVES, WHITE COTTON GLOVES, and STOCKINGS.

Full particulars of the requirements, etc., may be obtained on application to the Chief Constable, Police Headquarters, Carleton Hall, Penrith, Cumberland.

Last day for acceptance of Tenders—First Post, MONDAY, 9th May, 1960.

The Committee do not bind themselves to accept the lowest or any Tender, and reserve the right to accept a part of any Tender.

H. WATSON,
Chief Constable.

Chief Constable's Office,
Carleton Hall,
Penrith.

CONTRACTS

BOROUGH OF EPSOM AND EWELL.

CONSTRUCTION OF BOUNDARY WALLING.

The CORPORATION invite TENDERS from experienced contractors for the CONSTRUCTION of BRICK or FLINT BOUNDARY WALLING at the JUNCTION of WILMERHATCH LANE and HEADLEY ROAD, Epsom.

Copies of the Plan, Conditions of Contract, Specification, Bill of Quantities, Forms and Conditions of Tender may be obtained from the Office of MR. COLIN COBBETT, A.M.I.C.E., M.I.Mun.E., Borough Engineer and Surveyor, Town Hall, Epsom, during working hours upon payment of a deposit of £2 2s. Deposits will be returned to contractors submitting a bona-fide Tender not subsequently withdrawn.

Tenders must be delivered to me, at the address mentioned below, not later than Noon on MONDAY, the 16th May, 1960, and no Tender will be received and considered unless it is enclosed in a plain sealed envelope endorsed "Walling—Wilmerhatch Lane." This envelope must not bear any mark or name indicating the sender.

The Corporation do not bind themselves to accept the lowest or any Tender.

EDWARD MOORE,
Town Clerk.

Town Hall,
The Parade,
Epsom, Surrey.
April, 1960.

BOROUGH OF ERITH.

REMOVAL AND DISPOSAL OF REFUSE.

TENDERS are invited for the REMOVAL of approx. 30 tons per day of HOUSE and TRADE REFUSE from the Corporation's Loading Depot to an approved N.W. Kent Tip.

It is considered that the whole-time use of two vehicles of special type will be necessary, with other vehicles available in emergency.

Tender documents may be obtained from the Borough Engineer and Surveyor, Town Hall, Erith, Kent.

Tenders must be on the form provided, enclosed in a sealed envelope endorsed "Tender for Refuse Disposal," and should be delivered to the undersigned not later than 12 Noon, MONDAY, 9th May, 1960.

The contractor must be prepared to enter into a formal Contract and Bond with two sureties for the due performance of the Contract.

The Council do not bind themselves to accept the lowest or any Tender.

J. A. CROMPTON,
Town Clerk.

BOROUGH OF GRANTHAM.

TENDERS invited for SUPPLY and ERECTION of approx. 750 lin. yd. of CONCRETE POST and WIRE FENCING at BYRON AVENUE.

Specifications and Plans from the Borough Surveyor. Closing date: MONDAY, 16th May.

JOHN F. GUILE,
Town Clerk.

Guildhall,
Grantham.

BOROUGH OF HARROW.

PRIVATE STREET WORKS.

TENDERS are invited for the RE-LAYING of approx. 600 sq. yd. of SLAB PAVING, the LAYING of approx. 1,750 sq. yd. of IN-SITU CONCRETE PAVING, the RAKING OUT and SEALING of approx. 1,400 lin. yd. of EXPANSION JOINTS, and other works involved in the Making-up of a Private Street.

Drawings and Conditions of Contract may be inspected at the Office of, and a copy of the Form of Tender, Specification and Bills of Quantities obtained on application to, the Borough Engineer, at the Council Offices, 48 Uxbridge Road, Stanmore, Middlesex, on payment of Two Pounds by crossed cheque, made payable to the Harrow Borough Council, returnable where a bona-fide Tender reaches me within the prescribed time.

Tenders, on prescribed forms, enclosed in a plain envelope bearing no indication of the sender and endorsed "Tender—Arundel Drive Private Street Works," to be delivered to my Office not later than 10 a.m. on 31st MAY, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

DAVID PRITCHARD,
Town Clerk.

Council Offices,
Harrow Weald Lodge,
Harrow, Middx.

URBAN DISTRICT COUNCIL OF COULSDON AND PURLEY.

PRIVATE STREET IMPROVEMENT WORKS.

(a) MEADOW HILL (PART OF), PURLEY.
(b) WALBURTON ROAD, PURLEY.

TENDERS are invited for the ABOVE WORKS.

Bills of Quantities and Forms of Tender, prepared by H. M. COLLINS, A.M.I.C.E., may be obtained upon deposit of £3 3s., in respect of each Tender, which will be refunded upon receipt of bona-fide Tenders.

Plans, Specification and Conditions of Contract may be inspected at the Council Offices.

Sealed Tenders, in the envelopes provided, must be delivered to the undersigned not later than First Post on FRIDAY, 27th May, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

ERIC F. J. FELIX,
Clerk of the Council.

Council Offices,
Purley,
Surrey.

NORTH LINDSEY WATER BOARD.

THORNTON SCHEME.

SINKING AND TESTING OF 24IN. DIA. BOREHOLE.

TENDERS are invited for the SINKING and TESTING of a BOREHOLE at a site approx. 2¼ miles east of THORNTON CURTIS. The borehole will be 24in./18in. dia. to a depth of 250/350ft.

Form of Tender, Specification of Works, etc., may be obtained from the Office of the Engineer to the Board, Laneham Street, Scunthorpe, Lincs.

Tenders, in plain sealed envelopes, endorsed "Tender for Borehole," should be received by the undersigned not later than Noon on MONDAY, 23rd May, 1960.

The Board do not bind themselves to accept the lowest or any Tender.

T. M. LISTER,
Clerk to the Board.

Muncipal Offices,
34 High Street,
Scunthorpe.
April, 1960.

CONTRACTS

BOROUGH OF GILLINGHAM.

REDEVELOPMENT AREA.

CHURCH STREET—STAGE III.

44 DWELLINGS AND 16 GARAGES.

FIXED-PRICE TENDERS are invited for the ERECTION of 44 DWELLINGS comprising 18 Houses, Two Blocks of Six Flats, 14 Bungalows and 16 Garages, at Church Street, Gillingham, Kent.

Persons desirous of tendering may obtain copies of the Bills of Quantities, Specification and Form of Tender, and may inspect the Drawings and Conditions of Contract at the Borough Engineer's Department during usual office hours on and after 2nd MAY, 1960.

Applications should be accompanied by a cheque for Five Guineas (£5 5s.), made payable to Gillingham Corporation. The sum will be refunded on the receipt of a bona-fide Tender not subsequently withdrawn.

Tenders, in sealed envelopes supplied and endorsed "Tenders for 44 Dwellings and 16 Garages," must be delivered to the undersigned by not later than Noon on FRIDAY, 20th May, 1960.

FRANK HILL,
Town Clerk

Municipal Buildings,
Gillingham, Kent.
21st April, 1960.

CITY OF ROCHESTER.

LEVELLING AND SEEDING OF LABURNUM ROAD RECREATION GROUND.

LUMP-SUM TENDERS are invited for the LEVELLING and SEEDING of the LABURNUM ROAD RECREATION GROUND.

The works comprise the Bulk Excavation of approx. 5,000 cu. yd. Soil to be spread at fixed gradients, together with Stripping, Stacking and Re-spreading of Topsoil, Forming of Banks, Seeding of the whole area or approx. 19,300 sq. yd., and other ancillary works.

Drawings and General Conditions of Contract may be seen at the Office of J. A. PEEL, A.M.I.C.E., A.M.I.Mun.E., City Surveyor, 66 Maidstone Road, Rochester, during normal office hours, and from whom the Form and Conditions of Tender, Special Conditions of Contract, Specification and Bill of Quantities may be obtained on payment of a deposit of £2 2s., which will be refundable on the acceptance of a bona-fide Tender.

Tenders must be delivered to the undersigned, in the manner detailed in the above documents, not later than 12 Noon on MONDAY, 23rd May, 1960.

The Corporation do not bind themselves to accept the lowest or any Tender.

PHILIP H. BARTLETT,
Town Clerk.

Guildhall,
Rochester.
21st April, 1960.

ETON URBAN DISTRICT COUNCIL.

NEW SEWAGE PUMPING STATION AND FOUL WATER MANHOLES.

The works comprise the CONSTRUCTION of a SMALL AUTOMATIC ELECTRICAL SEWAGE PUMPING INSTALLATION, together with 23 FOUL WATER MANHOLES on existing Sewers, and appurtenant works.

Experienced public works contractors desirous of TENDERING for these works are invited to submit their names to R. E. TERRY, Surveyor to the Council, not later than SATURDAY, 7th May, 1960, together with a deposit of £2 2s., which will be refunded upon receipt of a bona-fide Tender.

H. G. CAMPION,
Clerk of the Council.

Council Offices,
102 High Street,
Eton,
Windsor, Berks.

CRAWLEY URBAN DISTRICT COUNCIL.

TRACTOR AND ANGLEDOZER.

TENDERS are invited for the SUPPLY of an INTERNATIONAL BTD6 CRAWLER TRACTOR or FORD COUNTY CRAWLER TRACTOR with Angledozer, for use at the Council's Refuse Tip, on the basis that a Bristol 25 Tractor is to be taken in part exchange.

Full particulars and Forms of Tender may be obtained from the Engineer and Surveyor, Goffs Park House, Horsham Road, Crawley, Sussex.

Tenders, in plain sealed envelopes endorsed "Tender for Tractor," should be delivered to the undersigned by not later than 12 Noon on 13th MAY, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

R. W. J. TRIDGELL,
Clerk of the Council.

Robinson House,
Robinson Road,
Crawley, Sussex.

QUOTATIONS are invited for the SUPPLY and ERECTION of a CONCRETE SURROUND for a SPORTS GROUND, 6ft. high x 720yd. long.—Replies to the Sports Secretary, DAVID BROWN INDUSTRIES, LTD., Park Works, Lockwood, Huddersfield.

TECHNICAL ESTIMATING SERVICES introduced by R. J. CARR. The only service of its kind in the country.—Westleigh House, 42 Coombe Road, New Malden, Surrey. Tel.: Malden 8640.

For Contracts received too late for classification see page 409

APPOINTMENTS VACANT

COUNTY BOROUGH OF BOURNEMOUTH.

BOROUGH ENGINEER'S DEPARTMENT.

APPOINTMENT OF RESIDENT ENGINEER.

APPLICATIONS are invited for the ABOVE POST on the £500,000 Scheme for the construction of Holdenhurst Sewage Disposal Works. Contract period approx. 2½ years and possibility of further contracts.

Salary up to £1,200 p.a.

No application forms will be issued, but Conditions of Service and outline of contract can be obtained from Borough Engineer.

Applications, giving names of two referees, and stating age, qualifications, and details of experience, to reach Borough Engineer, Town Hall, Bournemouth, by 12th MAY, 1960.

A. LINDSAY CLEGG,
Town Clerk.

APPOINTMENTS VACANT

EAST AFRICAN RAILWAYS AND HARBOURS ADMINISTRATION.

CIVIL ENGINEERS.

Qualifications: Candidates (aged 25-50) should have either a University Degree, or equivalent recognised by the Institution of Civil Engineers, and two years' practical experience; or have passed, or be otherwise exempt from, Parts I and II of the Final Examinations of the Institution of Civil Engineers and have had not less than five years' practical experience.

Experience should preferably have included major civil engineering and building work.

Duties: Major civil engineering and building work in connection with railway and harbour construction or maintenance of railways, buildings, bridges, port and dock installation, water supplies, piers and jetties, etc.

Emoluments in Scale £1,420-£2,090 p.a., with additional allowance in appropriate cases for construction work.

Terms: On contract for one tour of 36 months in the first instance with gratuity of 10 per cent. of emoluments on satisfactory completion of engagement.

Free passages: generous home leave. Free medical attention.

Apply DIRECTOR OF RECRUITMENT, Colonial Office, London, S.W.1. Give full name and age, and brief details of qualifications and experience. Quote BCD173/014/D.14.

BRECONSHIRE COUNTY COUNCIL.

ROADS AND BRIDGES DEPARTMENT.

APPOINTMENT OF DIVISIONAL SURVEYOR.

APPLICATIONS are invited for the APPOINTMENT of DIVISIONAL SURVEYOR in the Builth Wells Division, in Special Grade (£750-£1,030 per annum). Commencing salary dependent on qualifications and experience. Car allowance up to 10-h.p.

Housing accommodation available.

Forms, from the County Surveyor, Watton Offices, Brecon, to be delivered to the undersigned not later than MONDAY, 16th May, 1960.

C. M. S. WELLS,
Clerk of the County Council.

County Hall,
Brecon.

MONTGOMERYSHIRE COUNTY COUNCIL.

HIGHWAYS DEPARTMENT.

APPLICATIONS are invited for the FOLLOWING APPOINTMENTS:

(a) Engineering Assistant—Salary within the Special Grade (£785-£1,070 p.a.).
(b) Junior Engineering Assistant—within A.P.T. Grade I (£610-£765 p.a.).

Forms of application and particulars of the appointments may be obtained from the undersigned, to whom applications should be returned not later than the 7th MAY, 1960.

P. E. WHITE,
Clerk of the County Council.

County Offices,
Welshpool.
11th April, 1960.

ROYAL BOROUGH OF NEW WINDSOR.

AMENDED ADVERTISEMENT.

SENIOR ASSISTANT ENGINEER, suitably qualified, REQUIRED in the Borough Engineer's Department. Salary on A.P.T. IV (£1,065-£1,220); N.J.C. Conditions; a casual user car allowance may be payable; and unfurnished housing accommodation may be provided if, in the opinion of the Council, the circumstances so warrant.

Apply to Borough Engineer, Kipling Memorial Building, Alma Road, Windsor, for details, conditions of appointment, and instructions to applicants.

Closing date: Noon, MONDAY, 9th May, 1960.

J. E. SIDDALL,
Town Clerk.

BRIDGWATER RURAL DISTRICT COUNCIL.

RESIDENT ENGINEER.

APPLICATIONS are invited for the TEMPORARY APPOINTMENT of RESIDENT ENGINEER to supervise sewerage and water supply works under instructions of the Council's Consulting Engineers, MESSRS. LEMON AND BLIZARD. The conditions of employment will be in accordance with the National Scheme of Conditions of Service, and the salary will be within Grade A.P.T. IV (£1,065-£1,220 per annum).

Applicants should have had at least five years' experience of the supervision of works comprising sewers, rising mains and pumping stations, including excavation in waterlogged ground and reinforced concrete construction. They must be competent in the use of a level, in keeping records, setting-out, measuring-up, checking measurements and preparing record plans.

Works of sewerage and sewage disposal now in progress in the Parish of Westonzoyland will be completed by the end of the year, but it is anticipated that further works in other parts of the district will commence before that date. When supervision is extended to include these further works, a travelling allowance at essential user rate for car not exceeding 1,199 c.c. will be paid.

The successful candidate will be required to reside within the district, and assistance will be given in obtaining housing accommodation if required.

Applications, stating particulars of age, qualifications and experience, and the names and addresses of at least two persons to whom reference may be made, must be received by the undersigned not later than MONDAY, 2nd May, 1960.

H. G. BLAY,
Clerk of the Council.

The Priory,
St. Mary Street,
Bridgwater, Som.
14th April, 1960.

COLLEGE OF ADVANCED TECHNOLOGY, BIRMINGHAM.

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING.

APPLICATIONS are invited for the POST of LECTURER IN BUILDING (Construction and Quantities).

The successful candidate will assist in the teaching of general building subjects, with particular reference to Quantity Surveying. Candidates must offer sound experience of modern constructional techniques and the practice of quantity surveying as applied to contracting in the building industry. They should hold an appropriate professional or graduate qualification.

Salary Scales: Lecturers (Men): £1,370-£1,550.

Further particulars and Forms of Application from the Bursar, College of Advanced Technology, Gosta Green, Birmingham, 4.

Applications to be received within 14 days of this advertisement. Please quote X.

K. R. PILLING,
Clerk to the Governors.

APPOINTMENTS VACANT

TYNE IMPROVEMENT COMMISSION.

REPAIR AND STRENGTHENING OF TYNE COMMISSION QUAY.

CLERK OF WORKS (TEMPORARY).

APPLICATIONS are invited for the POST of CLERK OF WORKS at a wage of £16 per week, in connection with a contract for the repair and strengthening of Tyne Commission Quay, North Shields, by means of gunite and possibly with precast reinforced concrete. The contract will last approx. 18 months.

Candidates should be sufficiently experienced to undertake the supervision of the contract, inspection, preparation of reports, measurement of work, etc., under the direction of the Docks Superintending Engineer.

Applications, stating age, present appointment, and experience of this class of work, together with the names of two referees, should be sent to the Secretary, TYNE IMPROVEMENT COMMISSION, Bewick Street, Newcastle upon Tyne, 1, on or before WEDNESDAY, 11th May, 1960.

R. N. EGGLETON,
Secretary.

13th April, 1960.

FLINTSHIRE COUNTY COUNCIL.

COUNTY SURVEYOR'S DEPARTMENT.

APPLICATIONS are invited from suitably qualified and experienced persons for the FOLLOWING APPOINTMENTS in the County Surveyor's Department, in connection with the programme of new road works:

(a) One Trunk Roads Engineer — A.P.T. V (£1,220-£1,375).
(b) Two Senior Engineering Assistants — A.P.T. IV (£1,065-£1,220).

Applicants should preferably hold an Engineering Degree and/or A.M.I.C.E. or A.M.I.Mun.E., and have had good experience in the preparation and execution of major road schemes.

Application Forms obtainable (please specify the post) from the CLERK OF THE COUNTY COUNCIL, County Buildings (P.O. Box No. 1), Mold.

Closing date: 13th MAY, 1960.

COUNTY BOROUGH OF WEST HAM.

APPLICATIONS invited for the FOLLOWING:

(i) General Foreman, for appontment in Works Branch of Borough Engineer's Department, which executes varied building works ranging from alterations and repairs to multi-storey flat construction. Rate of pay 16 to 18 guineas per week, according to size of contract.
(ii) Two Bonus Measuring Assistants experienced in measuring building works in all trades for incentive bonus. Salary Misc. Grade V £650 to £715 p.a. plus London allowance £20/£30 p.a., according to age.

Applications in writing, giving full particulars of experience, age, etc., to Borough Engineer and Surveyor, West Ham Town Hall, Stratford, E.15, by 7th MAY, 1960.

COUNTY BOROUGH OF EAST HAM.

SENIOR ASSISTANT ENGINEER (GENERAL)—GRADE III (£880-£1,065).

London Weighting is paid in addition. Salary in excess of the minimum may be paid according to qualifications and experience.

A subsistence allowance may be granted over a reasonable period to the person appointed if unable to obtain suitable housing accommodation, necessitating the maintenance of two homes.

Further details and Application Forms, returnable by 13th MAY, 1960, from the TOWN CLERK, Town Hall, E.6.

BOROUGH OF WANSTEAD AND WOODFORD.

ASSISTANT WORKS SUPERINTENDENT, A.P.T. II (£765-£880 PLUS LONDON WEIGHTING).

APPLICATIONS are invited for the ABOVE ESTABLISHED APPOINTMENT. Preference will be given to applicants with previous municipal experience, particularly on highways and sewerage work.

Forms obtainable from, and to be returned to, the BOROUGH ENGINEER, Municipal Offices, High Road, Woodford, E.18, by First Post on 7th MAY, 1960.

Housing accommodation is available on a service tenancy.

BOROUGH OF GLOSSOP.

APPOINTMENT OF ENGINEERING ASSISTANT.

APPLICATIONS are invited for the ABOVE APPOINTMENT in the Engineer and Surveyor's Department. Salary within Grade A.P.T. I (£610-£765 p.a.); point of commencement according to experience.

Applications, stating age, qualifications and experience, together with names and adresses of two persons to whom reference may be made, should reach the undersigned not latr than MONDAY, 2nd May, 1960.

I. ARTHUR PUGH,
Town Clerk.

Municipal Buildings,
Glossop, Derbys.
April, 1960.

CITY OF LEICESTER.

NEW SEWAGE DISPOSAL WORKS, WANLIP.

APPOINTMENT OF ASSISTANT RESIDENT ENGINEER.

APPLICATIONS are invited for the ABOVE APPOINTMENT from suitably qualified persons, who should preferably be Corporate Members of the Institution of Civil Engineers and have had experience in similar work.

The duties of the post will include assisting the Resident Engineer, under the direction of the Consulting Engineers, MESSRS. J. D. AND D. M. WATSON, and acting for him in his absence in the supervision of the construction of the above new Sewage Works, comprising the construction of reinforced concrete sedimentation and storm water tanks, surface aeration units, final settling tanks, sludge digestion tanks, pumping stations, power house, laboratory and office, and incidental works.

The salary in the range of £900 to £1,100 p.a., depending upon qualifications and experience. The appointment is for the duration of the present programme of works, which is anticipated to be three years.

Housing accommodation available for married officers if required.

Applications, giving full details of age, qualifications and experience, together with the names of two referees, to be forwarded to the undersigned not later than THURSDAY, 5th May, 1960.

JOHN L. BECKETT, M.I.C.E.,
City Surveyor.

Town Hall,
Leicester.

APPOINTMENTS VACANT

CENTRAL ELECTRICITY GENERATING BOARD.

EASTERN DIVISION.

APPLICATIONS are invited for the FOLLOWING APPOINTMENT:

Third Assistant Engineer (Civil and Mechanical)—Divisional Electrical Department (Design and Construction Section), Divisional Headquarters, Cockfosters. Salary N.J.B., Class AX/DX, Grade V (£1,090 x £25—£1,215/£1,320 per annum plus London Weighting).

The successful applicant will be required to supervise contractors in the construction of civil engineering works for transmission sub-stations.

Applicants should have received training in civil and/or mechanical engineering, and have experience in the construction of sub-stations, and should preferably intend to qualify for Associate Membership of one of the Institutions of Civil, Mechanical or Electrical Engineers.

Experience in the construction of transmission lines on steel towers would be an advantage.

Apply by 7th MAY, 1960, quoting "Staff Vacancy No. 1319," giving age, details of qualifications and experience, to the Controller, CENTRAL ELECTRICITY GENERATING BOARD, Eastern Division, West Farm Place, Chalk Lane, Cockfosters, Barnet, Herts.

LONDON COUNTY COUNCIL.

DEPUTY and ASSISTANT RESIDENT ENGINEERS REQUIRED for Southern Outfall Works, Erith, reconstruction contract. Deputies to act as First Assistant to, and when necessary deputise for, the Resident Engineer responsible for section of contract for redevelopment of Southern Outfall Works.

Work includes construction of sedimentation tanks, aeration plant, digestion plant, power and pump houses, piers, culverts, pipework, roads, etc., entailing deep excavation in waterlogged ground, precast and shell piling and large-scale reinforced concrete construction. Candidates should have had general experience in charge of similar works.

Salary range £1,250-£1,400 for Deputies and up to £1,250 for Assistants, according to qualifications and experience.

Application Form from Chief Engineer (GS/CI/630/4), LONDON COUNTY COUNCIL, County Hall, S.E.1.

COUNTY OF LINCOLN — PARTS OF KESTEVEN.

GREAT NORTH ROAD, A.1—GRANTHAM BY-PASS.

TEMPORARY CLERK OF WORKS.

APPLICATIONS are invited for the FOLLOWING TEMPORARY APPOINTMENT expected to last for a period of about 20 months:

Clerk of Works—Salary £750-£850 p.a. plus overtime. Commencing salary according to experience.

Applicants should have had considerable experience in modern methods of road construction.

Applications, giving details of age, particulars of experience, and quoting the names of two referees, should be sent not later than the 9th MAY, 1960, to the CLERK OF THE COUNTY COUNCIL, County Offices, Sleaford, Lincs.

CITY AND COUNTY OF BRISTOL.

CITY ENGINEER AND PLANNING OFFICER'S DEPARTMENT.

APPOINTMENT OF ASSISTANT CIVIL ENGINEER—GRADE A.P.T. IV (£1,065/£1,220 P.A.).

APPLICATIONS invited from qualified Civil Engineers. Successful applicant will be employed in Main Drainage Section, and candidates should have wide experience in design of sewerage works, sewage disposal works and large pumping stations.

Candidates should have obtained a British University Degree in Civil Engineering and/or passed Associate Membership Examination of Institution of Civil Engineers, or Testamur of Institution of Municipal Engineers, together with appropriate experience for post.

Post pensionable; medical examination and probationary period of six months, except in case of an officer transferred from service of another Local Government Authority.

Housing needs of successful candidate and question of a contribution towards removal expenses favourably considered.

Applications should be arranged in following order: Age; nationality and whether married or single; educational training; professional qualifications; present position; salary and date of appointment; previous positions with salaries and dates of appointment; details of experience; any further remarks in support of application; notice required to terminate present appointment; whether related to a member or senior officer of the Council; names of two referees.

Canvassing disqualifies.

Applications to CITY ENGINEER AND PLANNING OFFICER, Cabot House, Deanery Road, Bristol, 1, by 9th MAY.

CITY OF CARDIFF.

CORPORATION WATERWORKS.

APPOINTMENT OF CLERK OF WORKS FOR LECKWITH RESERVOIR.

APPLICATIONS are invited for this TEMPORARY APPOINTMENT at a salary of £880 p.a., to supervise the construction of a Two Million Gallon Reinforced Concrete Reservoir at Leckwith, near Cardiff.

Applicants should have had considerable experience in high-quality reinforced concrete construction, be able to use a level, and generally administer the contract with the minimum of supervision. The contract is expected to be of approx. 18 months' duration.

Applications, stating age, experience, qualifications, present post and salary, together with the names of two referees, should reach me, in envelopes endorsed "Clerk of Works, Leckwith Reservoir," not later than 9th MAY, 1960.

S. TAPPER-JONES,
Town Clerk.

City Hall,
Cardiff.
April, 1960.

HAVANT AND WATERLOO URBAN DISTRICT COUNCIL.

APPLICATIONS are invited for the APPOINTMENT of CLERK OF WORKS (Civil Engineering) at a salary of £15 per week.

Applicants for this appointment must be suitably qualified and experienced in general municipal engineering works, and preferably sea defence works.

Assistance will be given towards the cost of removal expenses; housing accommodation will be provided for married applicants requiring it, and consideration given to the payment of a car allowance.

Forms of application and further particulars may be obtained from the ENGINEER AND SURVEYOR, 1 Park Road North, Havant, to whom applications should be returned not later than the 9th MAY, 1960.

APPOINTMENTS VACANT

COUNTY OF CORNWALL.

HIGHWAYS DEPARTMENT.

APPLICATIONS are invited from qualified Engineers for the APPOINTMENT of ASSISTANT ENGINEER within Grade IV (£1,065-£1,220). A car allowance will be paid.

Applicants must have had experience in design and preparation of major road schemes and execution of works, including small bridges and culverts.

Applications, together with names of two persons to whom reference may be made, should be sent to the County Surveyor, County Hall, Truro, by 12th MAY, 1960.

E. T. VERGER,
Clerk of the County Council.

County Hall,
Truro.
14th April, 1960.

LONDON COUNTY COUNCIL.

CLERKS OF WORKS (Class II) REQUIRED. Up to 303s. 6d. a week, according to experience.

Brief particulars to CHIEF OFFICER (AI/CI/1020/4), Parks Department, County Hall, S.E.1. (WATerloo 5000, ext. 8076).

SALISBURY AND WILTON RURAL DISTRICT COUNCIL.

REGIONAL WATER SUPPLY SCHEME—STAGE 4—CHALKE VALLEY.

APPOINTMENT OF RESIDENT ENGINEER.

APPLICATIONS are invited for the APPOINTMENT of RESIDENT ENGINEER to supervise, on behalf of the Council and under the direction of their Consulting Engineers, a contract for the construction of a 250,000-gallon reinforced concrete reservoir and the laying of about 23 miles of spun-iron water mains of various sizes up to 8in. dia.

The salary will be £1,100 per annum and a car allowance in accordance with the 10-h.p. scale will be paid for use on the works. The appointment, subject to satisfactory service, is expected to last for about 18 to 21 months but may be terminated by one month's notice on either side.

Applicants, who must have had experience of similar works, should apply in writing to the undersigned not later than 7th MAY, 1960, giving full particulars of age, qualifications and experience, together with the names of two responsible Engineers to whom reference may be made.

C. S. BROWN,
Clerk to the Salisbury and Wilton Rural District Council.

26 Endless Street,
Salisbury, Wilts.

CITY OF SHEFFIELD.

CITY ENGINEER AND SURVEYOR'S DEPARTMENT.

ENGINEERING ASSISTANTS.

APPLICATIONS are invited from suitably qualified persons for the FOLLOWING APPOINTMENTS on the PERMANENT STAFF of the CITY ENGINEER AND SURVEYOR (H. FOSTER, M.A., M.I.C.E., M.I.Mun.E.):

(a) Senior Engineering Assistants — Special Classes Grade (£785-£1,070 p.a.).
(b) Junior Engineering Assistants — Grade A.P.T. I-II (£610-£880 p.a.).

Applicants for the senior posts must be Chartered Civil or Municipal Engineers with good experience of general civil or municipal engineering work. Applicants for the junior posts should be interested in structures. Commencing salaries for all posts will be in accordance with experience and qualifications.

Superannuable posts; N.J.C. Conditions of Service; medical examination.

Applications, stating age, education and training, qualifications, experience, past and present appointments, and quoting the names of two referees, should be submitted to the undersigned by the 9th MAY, 1960.

JOHN HEYS,
Town Clerk.

Town Hall,
Sheffield, 1.

WEAR AND TEES RIVER BOARD.

SENIOR ASSISTANT ENGINEER—A.P.T. GRADE III (£880-£1,065 P.A.).

APPLICATIONS are invited for the ABOVE VACANCY from Chartered Civil Engineers or Graduates with experience in the design and execution of river improvement schemes. A good knowledge is required of survey work and hydraulic and structural calculations. Experience of direct labour work is desirable.

The commencing salary will be fixed in accordance with experience and qualifications.

The successful candidate will be required to provide and maintain a car not exceeding 10-h.p. (1,199 c.c.) with N.J.C. Essential Users' Allowances. Assistance in the purchase will be given if required.

The appointment is pensionable and will be subject to the Local Government Superannuation Act, 1953, and to medical examination.

Assistance in obtaining a house to rent can be given to persons not already residing in the Darlington area.

Application forms are obtainable from the Chief Engineer, MR. C. CLAY, B.Sc., A.M.I.C.E., at this address, and should be returned to him not later than 12th MAY, 1960.

J. E. LAVEN,
Clerk and Chief Financial Officer.

Greencroft East,
158 Coniscliffe Road,
Darlington.

SOUTH CARDIGANSHIRE WATER BOARD.

APPOINTMENT OF ENGINEERING ASSISTANT.

APPLICATIONS are invited for the TEMPORARY POST of ENGINEERING ASSISTANT on the Resident Engineer's staff on the Teifi Pools Scheme. The appointment is for approx. 12 months and the duties include the setting, measurement and supervision of mainlaying and service reservoir contracts.

The salary attached to the post is £880 p.a., with subsistence and travelling allowances at the rate of £150 p.a., plus a mileage allowance for use of the officer's own transport will also be given.

Applications, giving full details of qualifications, experience, and names of two engineers for the purpose of supplying references, are to be returned to the Engineer, 36 Alban Square, Aberaeron, not later than 16th MAY, 1960.

J. E. R. CARSON,
Clerk to the South Cardiganshire Water Board.

Swyddfa'r Sir,
Aberystwyth.

APPOINTMENTS VACANT

PLANT ENGINEER REQUIRED for plant depot near London. Must be apprentice trained and experienced in the field maintenance and repair of heavy civil engineering plant. Qualified to assist in the control of all departments in the depot and visit contracts in the U.K. Age not over 35. Salary in accordance with experience.—Write, with full particulars, to Box A.A.384, "The Contract Journal."

WANTED, fully experienced PERSON to take over Midlands area office for a company of bulk excavation contractors. Must be capable of pricing and securing contracts in area and supervising same. Write, giving full particulars of experience and salary required, to Box B.B.385, "The Contract Journal."

PRODUCTION SUPERVISOR REQUIRED for precast concrete works in South-West Middlesex. Must have experience of progressing and quality control in this industry. Applications in strict confidence, stating previous experience. — Write Box V.1688, "The Contract Journal."

JUNIOR ENGINEER REQUIRED by company specialising in shuttering and temporary structures. Applicant should be a capable draughtsman and preferably with some site experience. Salary by arrangement. Write brief details to: GUYREX EQUIPMENT, LTD., 25 Craven Street, London, W.C.2.

CUBITTS

Applications are invited from qualified ENGINEERS, aged 24-30, for a position in the soil mechanics section. The successful applicant will be responsible for site investigations and should have had experience in this work and in soil mechanics. The position is a permanent one and offers scope for advancement within an expanding organisation.—Please send full details, in confidence, to:

Personnel Manager (CJ5452),
HOLLAND & HANNEN AND CUBITTS (GREAT BRITAIN), LTD.,
1 Queen Anne's Gate, London, S.W.1.

CIVIL ENGINEERING ESTIMATOR (aged 25-30), with adequate training and some experience of tendering for general civil works, is REQUIRED by old-established contractors with offices in North London. This is a permanent appointment, with good prospects, for a suitable applicant. Staff pension scheme in operation. — Write, giving age, salary required, and fullest details of experience, to Box V.1708, "The Contract Journal."

MAINLAYING ESTIMATOR REQUIRED; long-established London contractors carrying out work in all parts of the country. A sound, practical knowledge and a wide experience of tendering for all types of pipelaying contracts is essential for this appointment, in which the successful applicant can look forward to permanent, pensionable employment, with excellent prospects.—Write, stating age, salary required, and giving fullest details of experience, to Box V.1707, "The Contract Journal."

BUILDERS' QUANTITY SURVEYORS REQUIRED. One for Middlesex and one for Wiltshire area. Must be experienced and energetic. Able to drive. Excellent salary and prospects for really capable men. Give particulars of age, experience and present emoluments to Box V.1718, "The Contract Journal."

CIVIL ENGINEER/AGENTS and FOREMEN REQUIRED for small and medium-sized contractors in South-East England. Must be fully competent and experienced to take full site control of roads, sewers and sewage disposal contracts. Permanent position after ability has been proven. Salary according to experience.—Apply in writing in first instance, giving full details, to H. MINTO AND CO., LTD., 21 Lower Fant Road, Maidstone, Kent.

THE LONDON FERRO-CONCRETE CO., LTD.

The continued rapid expansion of our company makes it necessary for the following additions to be made to our executive staff:—

(a) ESTIMATORS

Applicants should have at least five years' experience with building and civil engineering contractors. Preference will be given to men with specialised knowledge of R.C. frameworks and structures.

(b) SURVEYORS

Applicants should have at least five years' experience of preparing interim and final valuations with building and civil engineering contractors.

The age range for the above positions is 25/40. Housing accommodation can be made available, if required.—Applications should be made to:

The Chief Estimator and Surveyor,
THE LONDON FERRO-CONCRETE CO., LTD.,
Maxted Road, Hemel Hempstead.

FITTER, fully experienced and skilled, to maintain and recondition diesel engines, excavators, crawler tractors, dumpers, shovels, locos., etc. Age under 36. Substantial bonus scheme. Overtime. Permanent. Superannuation. House available. — JOHN HEAVER, LTD., Whyke Gravel Pit, Chichester.

FITZPATRICK AND SON (CONTRACTORS), LTD., have the following vacancies: (a) SITE CLERK, for Air Ministry contract, Norwich area, subsistence paid; (b) MATERIAL CHECKERS and TIMEKEEPERS, for Park Lane improvement contract, two years' duration; (c) H.O. TRANSPORT CLERK (20-25); (d) H.O. SUPPLIERS' INVOICE CHECKER (male or female).—Write or 'phone Personnel Officer, 455 Old Ford Road, London, E.3. ADVance 2991.

TRAINEE ESTIMATOR, young, for mastic asphalt and macadam surfacing trades, Merseyside area. Some knowledge of building trade an advantage. State experience, salary required and when available, to Box A.815, Lee and Nightingale, Liverpool.

SENIOR BUILDING ESTIMATOR. — Old-established national building and civil engineering contractor in the Midlands, with an expanding building programme, invites applications from fully trained building estimators able to work on own initiative for contracts up to £1m. value. Top salary, pension scheme, etc., available to suitable man.—Applications should state age, training, recent experience, etc., in confidence to Box V.1694, "The Contract Journal."

EARTHMOVING REPRESENTATIVE.—Due to promotions, two experienced SALES REPRESENTATIVES, with background of contractors' plant, are urgently REQUIRED by old-established firm of repute. The areas concerned include Sussex, Hampshire, Surrey, Wiltshire, Gloucestershire, Oxfordshire and Berkshire. Remuneration is by salary and commission, and only people expecting to earn upwards from £1,300 per annum should apply. Out-of-pocket expenses are paid, and a car provided.—Replies, containing full details, age, and present area covered, should be addressed to Home Sales Manager, BRAY CONSTRUCTION EQUIPMENT, LTD., Faggs Road, Feltham, Middlesex.

APPOINTMENTS VACANT

ASSISTANT CONTRACTS MANAGER REQUIRED by established West Country company, to be later appointed Contracts Manager. Applicants should have experience of road construction, surface water drainage, and associated ancillary works, and be capable of setting-out and levelling, etc. Pension scheme in operation; car provided, etc.—Write full details of experience, and present salary, etc., to Box V.1476, "The Contract Journal."

ENGINEER AGENT REQUIRED for sewerage and sewage disposal works contract in Cheshire. Must be capable of working on own initiative.—Applicants should state, in confidence, age, experience and details of past employers to Box V.1719, "The Contract Journal."

EXPERIENCED, reliable CLERK OF WORKS urgently REQUIRED to commence work preferably now, or within six weeks. Salary, according qualifications, experience, up to £1,250. Contract, comprising 15-storey block offices, shops, etc., at Crown Site, Morden, to last about 21 months.—Apply to A. GREEN, A.R.I.B.A., 23 Fitzroy Street, W.1. LAN 5051.

A VACANCY exists with well-known building and civil engineering contractors in West Middlesex for a SENIOR SURVEYOR with sound knowledge and experience of interim valuations and final accounts. A salary range of £1,250/£1,500 will be offered to the applicant of proven ability, possessing initiative and drive. Pension and bonus schemes in operation. Write full particulars to Box V.1698, "The Contract Journal."

WIMPEY

Applications are invited from CIVIL or MUNICIPAL ENGINEERS for appointments in their London, Cardiff and Birmingham offices. Applicants, within the age range 35-45, should have considerable general experience in municipal engineering and, in particular, the design and construction of roads and sewers and attendant works. Corporate Membership of the Institution of Civil Engineers or Municipal Engineers is essential. The appointments will involve responsibility for all matters in connection with the advance preparation of housing sites, together with the direction and control of staff engaged upon the design of such matters. Commencing salaries £1,200-£1,500 per annum. A car will be provided, and a staff pension scheme is in operation.—Applications, giving full details of experience, and quoting Ref. 933A, to:

Establishment Officer,
GEORGE WIMPEY AND CO., LTD.,
27 Hammersmith Grove, London, W.6.

SITE ENGINEERS REQUIRED for large civil engineering contracts in Midlands and Southern areas. Good prospects for keen and accurate engineers. Reply, stating details of age, experience and salary required, to: M. J. GLEESON (CONTRACTORS), LTD., C.E. Department, Haredon House, London Road, North Cheam, Surrey.

CHIEF CHEMIST REQUIRED, to be in charge of building materials testing and research laboratories in the outskirts of London. The position offers good salary and participation in pension scheme; housing could probably be arranged. Possibilities of further advancement to technical director. Own staff informed.—Please send applications, outlining previous experience and job histories, stating salary required, which will be treated confidentially, to Box V.1695, "The Contract Journal."

ESTIMATOR, with experience in road surfacing, excavation, concreting, drainage, etc., REQUIRED. Write, giving full details of previous experience and age, and salary required, to HOME COUNTIES CONTRACTING CO., LTD., 24/28 Hertford Road, Edmonton, N.9.

PROJECT MANAGER urgently REQUIRED for a large motorway. Preference given to applicants with previous experience on similar work or schemes of major importance. This post offers exceptional conditions and prospects for future advancement to suitable applicants. Fullest details must be given. Only applicants with proved background will be considered. Preference given to qualified engineer.

CHIEF ENGINEER for major motorway. Applicants must have had previous experience. Preference given to qualified engineer aged 35 to 50. This position offers excellent prospects for advancement. The person appointed will be required to supervise all engineering works and staff on a major scheme. Reply, giving fullest details, past experience and salary required.

Write Box V.1778, "The Contract Journal."

CUBITTS

Applications are invited from AGENTS for important civil engineering contracts in the London area. Applicants should have had good experience in general civil engineering and must be capable of controlling work to the value of £1m., forming part of a larger contract. The work involves deep excavation, and heavy reinforced concrete construction, and the successful applicant will work as a member of a team under the direction of a project manager.—Please send full details, in confidence, to:

Personnel Manager (CJ/15448),
HOLLAND & HANNEN AND CUBITTS (GREAT BRITAIN), LTD.,
1 Queen Anne's Gate, London, S.W.1.

ESTIMATING SURVEYOR REQUIRED. Must be experienced, preferably having local outside contacts, and be capable of working on his own initiative. Contracts to value of £50,000.—Write, stating age, experience, and salary required, in confidence, to MESSRS. W. BENGRY AND SONS, LTD., Longmoor, Kingsland, Leominster, Herefordshire.

CIVIL ENGINEERING AGENTS REQUIRED for works of a civil engineering nature—piling, reinforced concrete works, sea defence—by well-known firm of London contractors, to work from their Cheshire office. Over 30 years of age. Good salary and prospects, with pension scheme. — Write Box V.1697, "The Contract Journal."

SENIOR ENGINEER/AGENT REQUIRED, with experience in roads, sewers, bulk excavation and general civil engineering work, to control and organise such works. A car will be provided and a pension scheme is available. Replies, which will be treated in confidence, should state age, experience and salary required.—S. M. TIDY (PUBLIC WORKS), LTD., 161 Preston Road, Brighton, 5, Sussex.

CONTRACTS SUPERVISOR, South Warwickshire, for tarmacadam and drainage contractors. Mostly small contracts. Pressure of work calls for additional staff. Able to use level and set out efficiently, and preferably good practical experience, with organising ability. — State full details and salary letter first instance, in confidence, to Box V.1717, "The Contract Journal."

APPOINTMENTS VACANT

QUALIFIED CIVIL ENGINEER REQUIRED as SENIOR ESTIMATOR in our London office. Able to carry out preliminary design for great variety of structures, mainly reinforced concrete. Salary according to age and experience within the range £1,250-£1,750 p.a. Five-day week. Superannuation scheme, luncheon vouchers, etc.—Apply: J. L. KIER AND CO., LTD., 7 Lygon Place, Grosvenor Gardens, Westminster, London, S.W.1.

EXPORT EXECUTIVE, 25/35 years, with sound practical knowledge contractors' plant, some management experience, REQUIRED. Must be willing to travel extensively; foreign languages an advantage. Write Box V.1745, "The Contract Journal."

YOUNG MAN, with ambition, personality and works or field experience of contractors' plant, REQUIRED for training to take part in an expanding programme of overseas plant distribution.—Write Box V.1746, "The Contract Journal."

TOWER CRANES.—GEORGE COHEN'S REQUIRE a SPECIALIST SERVICE ENGINEER for their tower crane department. Must be fully experienced in mechanical repairs and maintenance, as well as having a general knowledge of erecting and electrical work. Applications in writing to Personnel Manager, 600 Wood Lane, London, W.12.

SENIOR BUYER REQUIRED by civil engineering contractors. Salary commensurate with qualifications and experience.—Apply in writing, with full details, to Secretary, CHRISTIANI AND NIELSEN, LTD., Romney House, Tufton Street, S.W.1.

WIMPEY ASPHALT

Applications are invited for the following head office appointments:—

ASSISTANT ESTIMATORS or
TRAINEE ESTIMATORS

for road surfacing and mastic asphalt. Age range 18-25. Minimum academic standard: G.C.E. "O" level. Some experience an advantage but not essential. Written applications, quoting Ref. 952A, to:

GEORGE WIMPEY AND CO., LTD.,
27 The Grove, Hammersmith, London, W.6.

CONSULTING engineers have vacancies in West of England for ASSISTANTS having some experience of water supply, sewerage and sewage disposal work. Salary up to £1,000 per annum, according to age, qualifications and experience.—Write, with full particulars, to Box V.1724, "The Contract Journal."

PLANT HIRE OFFICE TRAINEE. Specialist hire company South Yorks. REQUIRE intelligent young man interested in commerce, sales and general plant administration, able to take early responsibility. Pleasant and interesting post. Commencing £10/£14 per week, with excellent prospects. — Write Box V.1730, "The Contract Journal."

ASSISTANT WORKS MANAGER for precast concrete and cast stone works.—Please state age, experience, and salary required, to WARINGSTONE, Castle Street, Portchester, Hants.

MANAGER REQUIRED for civil engineering contractor's depot in the London area. Must be experienced in plant repairs and be capable of organising transport and the movements o plant.—Write, stating age, experience, and salary required, to Box V.1731, "The Contract Journal."

AN OLD-ESTABLISHED FIRM

Of civil engineering contractors, whose present and past staff have established an excellent name for it in the industry, are now seeking to establish a "next generation" of AGENTS, SUB-AGENTS, ENGINEERS and FOREMEN. Posts would suit people seeking permanent pensionable work with a medium-sized firm, which has always treated its staff with every consideration in return for loyalty and a "fair day's work." Our own staff have been told of this advertisement.—Please write, with full details, to:

BOX V.1659, "THE CONTRACT JOURNAL."

BUYING CLERK.—ROBERT M. DOUGLAS (CONTRACTORS), LTD., REQUIRE experienced man with good knowledge of materials markets to take charge and develop section in estimating department to obtain material and sub-contract quotations. Excellent opportunity for man with ability and initiative to control team under limited supervision of Chief Estimator. Preference given to applicants with experience in interpreting specifications, bills of quantities and drawings.—Apply, in confidence, stating age,, experience, and salary required, to the Secretary, 395 George Road, Birmingham, 23.

EXPERIENCED STOREKEEPER REQUIRED by expanding firm of builders' and plumbers' merchants in the Bolton area. Capable of keeping stock records and organising and handling stores generally. Some knowledge of the building or allied trades essential. Age limit 21 to 45 years. Permanent position with good prospects.—Write full details and approx. salary required to Box V.1738, "The Contract Journal."

FENCING SPECIALISTS of highest repute REQUIRE an experienced ESTIMATOR. Only applicants with experience in timber, concrete and chain link fencing and gates need apply.—Write Box V.1739, "The Contract Journal."

SITE AGENTS and GENERAL FOREMEN

SIR LINDSAY PARKINSON AND CO., LTD., invite applications for the above positions.—Applicants, who must be fully experienced in carrying out major building contracts of all tyeps, should forward all details to:

Building Director,
SIR LINDSAY PARKINSON AND CO., LTD.,
6 Lambeth Road, London, S.E.1.

BOURNEMOUTH. — Long-established engineering company REQUIRE a REPRESENTATIVE of excentional calibre to play key part in expansion of contractors' plant division. Energetic, technically sound, with comprehensive sales experience. Excellent salary opportunities in step with development of division by right man. Age limits 28-40. Non-contributory pension scheme and life assurance.—Write in confidence to Managing Director, HUNT AND CO., LTD., 51-65 Holdenhurst Road, Bournemouth.

THOMAS LOWE AND SONS, LTD., of Curzon Street, Burton-on-Trent, have a vacancy for a GENERAL FOREMAN capable of taking charge of building contracts in the Birmingham area up to a value of £200,000. — Applications should be submitted, in writing, stating age, experience and salary required.

APPOINTMENTS VACANT

JOINER (Finisher) REQUIRED for work in Glasgow yard of civil engineering contractors. W.R.A. rates.—Apply to R. J. McLEOD (CONTRACTORS), LTD., 22 Lynedoch Street, Glasgow, C.3.

GANGERS REQUIRED for civil engineering works in and around Glasgow.—Apply to R. J. McLEOD (CONTRACTORS), LTD., 22 Lynedoch Street, Glasgow, C.3.

FITZPATRICK AND SON (CONTRACTORS), LTD., REQUIRE AGENTS and SUB-AGENTS experienced in motorway, airfield and road reconstruction. Must be prepared to travel. — Apply in writing, giving details of previous experience, etc., last three employers, and duration of employment with each, to 455 Old Ford Road, Bow, E.3.

CLERKS OF WORKS and INSPECTORS OF WORKS, with high-class experience in building and civil engineering work, respectively, WANTED by consulting engineers for service at Tema Harbour, Ghana. 12-month tours; free accommodation; generous leave; good salaries.—Apply in writing to SIR WILLIAM HALCROW AND PARTNERS, Alliance House, Caxton Street, London, S.W.1.

FOREMAN for Nigeria REQUIRED for civil engineering work in Nigeria, for an 18-month tour with an established concern. Preferably single, tradesman, under 40, of good health, character and intelligence. Wide experience required and able to work on own initiative, handling small contracts from main office if required. References required later. Applications, in confidence, giving details of experience, positions held, age, health, domestic responsibilities, etc., to Box V.1669, "The Contract Journal."

CUBITTS (NORTH-WEST)

Staff positions.—Due to expansion and promotion, there are openings for the following staff:
QUANTITY SURVEYORS (Ref. QS/5)
ASSISTANT QUANTITY SURVEYORS (Ref. QSA/8)
COST SURVEYORS (Ref. COS/3
Applicants for above positions must be prepared to work on contract sites in various parts of the north-west.
BUYING ASSISTANTS (age 21-25) (Ref. BUY/6)
Vacancies are at headquarters, Bromborough.
Applicants should quote appropriate reference and give full details of past and present employment and salary (in confidence), together with education, qualifications, age and when available. All staff appointments are eligible for pension and bonus schemes. The company will also consider applications from suitable candidates for other technical positions.—All applications should be addressed to:

Personnel Officer,
HOLLAND & HANNEN AND CUBITTS (NORTH-WEST), LTD.,
Building and Civil Engineering Contractors,
New Chester Road, Bromborough, Wirral, Cheshire.

SITE ENGINEERS REQUIRED for civil engineering contracts Keen young men with previous site experience essential. Qualifications preferred. Must be mobile, and preference given to persons interested in cost analysis. Prospects of permanency, with pension scheme, available to right man.—Write, giving personal details and experience, to HARBOUR AND GENERAL WORKS, LTD., 173 St. Stephen's House, Victoria Embankment, Westminster, S.W.1.

SCOTTISH LAND DEVELOPMENT CORPORATION, Glasgow, Newcastle, Nottingham, London, distributors of earthmoving equipment.—In view of the expansion of the company's activities, two senior appointments are open to men with proved experience in the civil engineering or allied industries. These appointments offer a unique opportunity to men of integrity wishing to make a career in the earthmoving industry in the North-East of England:—
PLANT MANAGER.—Responsible for the operation and maintenance of the company-owned earthmoving equipment and developing existing plant hire business in the north-eastern area
DEPOT MANAGER.—Responsible for the co-ordination of the functions of the existing depot organisation in North-East England and for the general promotion of the company's interests.
Both these posts are permanent and pensionable, and those appointed will be responsible to the regional manager. — Apply, in confidence, to the Managing Director, SCOTTISH LAND DEVELOPMENT CORPORATION, 72 Dykehead Street, Queensile, Glasgow, E.3.

FOSTER WHEELER, LTD., LONDON

Vacancies will shortly exist for the following site staff on construction work at home and overseas:
SITE MANAGERS
CHIEF ENGINEERS
ON-SITE and OFF-SITE SUPERINTENDENTS
PLANNING and PROGRESS ENGINEERS (for head office and site duties)
OFFICE MANAGERS
MATERIAL CONTROLLERS
CRAFTSMEN GENERAL FOREMEN (all trades)
Only men with extensive experience in oil refinery or chemical plant construction, able to provide first-class references, should apply (in writing) to:

Construction Manager (Process Plants),
FOSTER WHEELER, LTD.,
3 Ixworth Pace, London, S.W.3.

A VACANCY exists with well-known building and civil engineering contractors in Birmingham for a SENIOR SURVEYOR with sound knowledge and experience of interim valuations and final accounts. A salary range of £1,200/£1,500 will be offered to the applicant of proven ability, possessing initiative and drive. Pension and bonus schemes in operation. Write full particulars to Box V.1670, "The Contract Journal."

CIVIL or STRUCTURAL ENGINEERING DESIGNER REQUIRED for head office appointment. Experience in reinforced concrete design, foundations and industrial structures an advantage. Permanent position with good salary, bonus scheme, and opportunity for advancement. Entry into superannuation scheme at the end of 12 months' service.—Applicants should write, stating age, qualifications, and details of career to date, to THE MITCHELL CONSTRUCTION CO., LTD., Wharf Works, Peterborough.

ASSISTANT ENGINEER / SURVEYOR REQUIRED for land surveys, design of roads and sewers, setting-out and supervision of road works by direct labour. Applicants should have received professional training and be of an intermediate standard. This is a new post in an expanding department, and provides excellent prospects for the right man. Non-contributory pension scheme.—Applications, in writing, stating age, qualifications, experience, and salary required, to the Engineer and Surveyor, A. J. WAIT AND CO., LTD., Wellington Crescent, New Malden, Surrey.

APPOINTMENTS VACANT

CIVIL ENGINEERING. — Additional staff are REQUIRED for the management of our civil engineering contracts, owing to continous expansion of our activities. We are a large public company engaged in civil engineering and building, and are seeking ambitious men, with a genuine interest in modern management techniques, to fill the following positions:—
MANAGER.—To take control of all the company's civil engineering contracts. Candidates, aged 35 to 45, should preferably have a university degree and/or A.M.I.C.E., and proved ability to manage a number of civil engineering contracts concurrently.
AGENTS and SUB-AGENTS.—For the site management of civil engineering contracts up to £300,000 in value. Candidates, aged 30 to 40, and 25 to 35, respectively, should preferably have a university degree and/or have passed the examinations for A.M.I.C.E., and should have previous experience in site management.
Remuneration is high, and commensurate with the responsibilities attaching to each position. Profit-sharing, superannuation and car schemes are in operation, and assistance will be given with accommodation, if required.—For further details apply, in strict confidence, to A. C. Bryant, Managing Director, C. BRYANT AND SON, LTD., Small Heath, Birmingham, 10, quoting reference CJ/460.

INVOICE CLERK (Male) urgently REQUIRED by joinery manufacturers. Good wages and conditions. Apply 77 South Lambeth Road, S.W.8. Reliance 3340.

SITE AGENT

Due to ill-health, an immediate vacancy exists for an experienced AGENT to take charge of a large multi-storey building contract in Lancashire. Generous salary, out-allowance and use of company vehicle for man capable of controlling R.C. construction, all building trades and sub-contractors. This is a permanent appointment with excellent prospects of promotion. Pension fund in operation. — Reply, in confidence, quoting reference SC12, stating age, previous experience in this class of work, to:

Contract Labour Department,
SIMON-CARVES, LTD.,
Cheadle Heath, Stockport, Cheshire.

ESTIMATOR REQUIRED by well-known firm of road surfacing contractors, to fill vacancy in their Birmingham office. This is an excellent opportunity for a young man with drive and ambition. Applicants must be fully experienced in preparing tenders and estimates for all sizes and classes o. surfacing work. Write Box V.1648, "The Contract Journal."

QUANTITY SURVEYOR REQUIRED by building and civil engineering contractors with head office in London. The successful applicant must be experienced and capable of working without supervision. Permanent post with pension scheme for suitable applicant. Written applications, giving details of age, education, experience, references, and salary required, to:
Box V.1735, "The Contract Journal."

DICK HAMPTON REQUIRES SECTOR MANAGER to supervise sub-contracts between 250,000yd. and 25,000yd., and amounting to one million yards per year. Preference to ambitious young men with previous experience in similar capacity. — DICK HAMPTON, Broadview Farm, Blacknest, Alton, Hants. Tel.: Bentley 2241.

FOREMAN REQUIRED for playing fields contract in South Wales. Applicants must have considerable experience in this class of work. Top rate and subsistence allowance paid.—PACKMAN, MORIARTY CO., LTD. Station Yard Porthcawl Glam.

MARTIN AND CO. (CONTRACTORS), LTD.

Have vacancy for CIVIL ENGINEER-AGENT, who is needed to give personal attention to local contracts. Increasing opportunity for man 25-35 years of age with new expanding company. Car provided.—Write:

MARTIN AND CO. (CONTRACTORS), LTD.,
1195 Bristol Road South, Northfield, Birmingham, 31.

QUANTITY SURVEYOR REQUIRED to measure earthwork quantities on group of sub-contracts. Opportunity in expanding organisation for strong personality who has also the ability for good-humoured negotiation.—DICK HAMPTON, Broadview Farm, Blacknest, Alton, Hants. Tel.: Bentley 2241.

WIMPEY.—Vacancies exist for CIVIL ENGINEERING FOREMEN with experience in building site groundworks and who are familiar with roads and sewer construction work. Good remuneration offered to the right men.—Write, stating age and experience, to GEORGE WIMPEY AND CO., LTD., 27 Hammersmith Grove, London, W.6. (Ref. 955.H.)

SIR LINDSAY PARKINSON AND CO., LTD., have a vacancy for an AGENT to run a medium-sized contract in the North Midlands. Candidates should have had previous experience as an Agent on contracts up to at least £300,000 in value, and preferably be A.M.I.C.E. High salary and first-class prospects for suitable applicant. — Reply in confidence to Civil Engineering Director, 6 Lambeth Road, St. George's Circus, London, S.E.1.

TAYLOR WOODROW CONSTRUCTION, LTD.

Invites applications from CIVIL ENGINEERS with wide site experience of major civil engineering projects, to be engaged upon the planning of such works at the head offices in Southall. Conditions of employment are attractive. A pension scheme is in operation.—Write, giving brief details of personal history and availability for interview, to:

Personnel Manager,
TAYLOR WOODROW CONSTRUCTION, LTD.,
345 Ruislip Road, Southall, Middlesex.

NATIONAL civil engineering contractors have a vacancy on £2½m. contract for CHIEF ENGINEER. Contract involves difficult foundation work and reinforced concrete. Some knowledge of prestressed concrete an advantage. Must be at least an A.M.I.C.E. Company's own staff advised of this vacancy, which will carry a high salary.—Reply in confidence to "MA," Box CJ342, LPE, Romano House, 399/401 Strand, W.C.2.

FIRST-CLASS SALES ENGINEER REQUIRED by major manufacturer for handling concrete construction equipment.—Please write to Sales Manager, Box C.T.160, c/o 191 Gresham House, E.C.2.

APPOINTMENTS VACANT

SIR LINDSAY PARKINSON AND CO., LTD., have vacancies on major contracts in the South and East of England for the following Staff: SUB-AGENTS with experience as Sub-Agent on large contracts or as Agent on contracts of at least £400,000 in value: A.M.I.C.E. an advantage. SECTION ENGINEERS: A.M.I.C.E., with experience in a similar capacity. ASSISTANT ENGINEERS, with a minimum of three years' site experience with contractors. First-class salaries, conditions and prospects for suitable applicants.—Reply in confidence to Civil Engineering Director, 6 Lambeth Road, St. George's Circus, London, S.E.1.

SOUND general civil engineering CONTRACTS ENGINEER. Capable of dealing with estimating, planning, practical works and all accounts. Value of contracts up to £100,000. Sound prospects for right man prepared to settle. Salary £1,200-£1,500. Car provided. — Reply to the Secretary, WORCESTER PLANT HIRE AND CONTRACTORS, LTD., 6 Bank Street, Worcester.

PLANT HIRE REPRESENTATIVE REQUIRED to take over area after training. Knowledge of hire procedure and experience of cranes desirable. Splendid opportunity for development. North Midlands area. Only applications giving fullest details experience, salaries earned and required will be considered. Write Box V.1772, "The Contract Journal."

TAYLOR WOODROW CONSTRUCTION, LTD.

REQUIRE experienced BUILDING and CIVIL ENGINEERING ESTIMATORS. Applicants must be experienced in large-scale works. Pension scheme. Excellent opportunities.—Write, giving brief details of experience and present employment, which will be treated in strict confidence, to:

Personnel Manager,
TAYLOR WOODROW CONSTRUCTION, LTD.,
345 Ruislip Road, Southall, Middlesex.

OFFICE MANAGER, to be responsible for all commercial aspects of specialised plant hiring and contracting company with big development programme. Capable and energetic man able to take charge of sales, advertising, costing, etc. Excellent opportunity to develop by own efforts. Applicants should render clear chronological statement of education and experience, with salaries earned and required initially. Permanent superannuated post, pleasant situation in S. Yorks.—Write Box V.1774, "The Contract Journal."

EXPERIENCED AGENT, aged 30 to 40 years, gas and water main laying, REQUIRED by medium-sized firm of public works contractors for contracts in London and Home Counties. Permanency for suitable applicant. Non-contributory pension scheme. State age, experience and salary required to Box V.1787, "The Contract Journal."

Please return as soon as read —... — ...

INSIDE SALES ASSISTANT, with a knowledge of contractors' plant and tools—hire and sale, REQUIRED by GEORGE COHEN SONS AND CO., LTD., for their Glasgow office. Good prospects for advancement. Pension scheme after probationary period.—Applications in writing, stating experience, to Personnel Manager, 600 Wood Lane, London, W.12.

ASSISTANT PLANNING ENGINEER

Civil Engineer, preferably qualified, in his early thirties, REQUIRED as ASSISTANT to Divisional Planning Engineer in Doncaster. The position, which is permanent and progressive, would be concerned with detailed site planning for construction of heavy civil projects, and candidates should have experience of design of temporary works, track layouts, shuttering, etc.—Write, with concise details and stating salary required, to:

Personnel Officer,
THE CEMENTATION CO., LTD.,
20 Albert Embankment, London, S.E.11.

JUNIOR ENGINEER REQUIRED with view to early promotion to Area Engineer, in charge of large modern fleet of mobile cranes. Pref. qual. H.N.C. Sound apprenticeship in general engineering or transport and some administrative and commercial experience. Location near Sheffield. Progressive superannuated post commencing £750 approx. p.a.
Write Box V.1773, "The Contract Journal."

ENGINEER-AGENT REQUIRED for large asbestos-cement water main scheme. Age 30-45. Must be fully experienced in this class of work and be prepared to travel. Salary commensurate with age and experience.—Write, including copies of references, to Box V.1740, "The Contract Journal."

SALES REPRESENTATIVE to handle all Fordson-engined items of industrial and contractors' plant. Experience in this field essential. Good prospects. Apply by letter, giving details of age and experience, to The Manager, KNUTSFORD MOTORS, LTD., Stoke-on-Trent.

CONTRACTORS' SITE STAFF

REQUIRED for dam construction contracts in Central and North Wales, including:

GENERAL SUPERINTENDENTS and GENERAL FOREMEN
with some years' experience in similar positions on medium/heavy civil engineering contracts.

GENERAL FOREMAN
with major industrial building experience for power station site.

FOREMAN JOINER
with shuttering experience on heavy concreting. Men up to 45 years of age should write, stating age, experience and salary required, to:

Personnel Officer,
THE CEMENTATION CO., LTD.,
20 Albert Embankment, London, S.E.11.

TRAINEE SALESMAN-DEMONSTRATOR REQUIRED to handle Fordson-engined industrial plant. Age not to exceed 24 years.—Apply in writing, giving details of education and experience, to The Manager, KNUTSFORD MOTORS, LTD., Stoke-on-Trent.

CUBITTS.—Applications are invited from AGENTS and GENERAL FOREMEN well experienced in control of general heavy civil engineering construction, and from SENIOR and JUNIOR CIVIL ENGINEERS for work on site or at head office.—Please send full details, in confidence, to Personnel Manager, (I.5461/C), HOLLAND & HANNEN AND CUBITTS (GREAT BRITAIN), LTD., 1 Queen Anne's Gate, London, S.W.1.

APPOINTMENTS VACANT

CRANE SUPERVISORS by company operating fleet of lorry-mounted cranes based at strategic points throughout the company. After initial training period duties would consist of representation to customers, programming machines, detailing crews, supervision of contracts. Age group 25 to 40. Only responsible men with initiative who are interested in this type of work and who have mechanical engineering background need apply. Salary would be dependent upon results, but not less than £800 per annum plus bonus.—Apply in writing, giving details of past experience, etc., to Box V.1742, "The Contract Journal."

CUBITTS.—Surveying and Estimating Staff. Appointments in London will be made as follows: SENIOR SURVEYOR (Civil Engineering), not less than seven years' experience after training. SURVEYOR and ESTIMATOR/SURVEYOR, medium-sized building work. The positions offer very good conditions and prospects in a large and expanding organisation. Suitably qualified candidates are invited to write in strictest confidence to Personnel Manager (I.5460/C), HOLLAND & HANNEN AND CUBITTS (GREAT BRITAIN), LTD., 1 Queen Anne's Gate, London, S.W.1.

QUANTITY SURVEYORS AND ASSISTANTS

REQUIRED for London, provincial and overseas contracts. Good salary, superannuation, excellent prospects.—Write, giving details of experience, age, etc., to:

Personnel Department,
HUMPHREYS, LTD.,
Building and Civil Engineering Contractors,
199 Knightsbridge, S.W.7.

TAYLOR WOODROW CONSTRUCTION, LTD., REQUIRE an experienced COST CLERK, accustomed to civil engineering works, on the Hinkley Point Atomic Power Station contract, near Bridgwater, Somerset. This is a staff appointment Camp accommodation available.—Write to the Agent.

SITE ENGINEERS REQUIRED for large civil engineering contracts in Midlands and Southern Areas. Good prospects for keen and accurate Engineers. Reply, stating details of age, experience, and salary required, to M. J. GLEESON (CONTRACTORS), LTD., C.E. Department, Haredon House, London Road, North Cheam, Surrey.

CUBITTS.—REINFORCED CONCRETE DESIGNERS, DETAILERS and DRAUGHTSMEN are REQUIRED for an immediate expansion of structural drawing office. The work will be interesting and involve the use of precast and prestressed concrete. Experience in these techniques will be an asset, but opportunity will be provided for training those who are interested and have some basic knowledge of reinforced concrete. Please send full details to Personnel Manager (C15462), HOLLAND & HANNEN AND CUBITTS (GREAT BRITAIN), LTD., 1 Queen Anne's Gate, London, S.W.1.

ASSISTANT QUANTITY SURVEYOR REQUIRED for major road and bridge work contract in Lincolnshire. Fine prospects, permanent position, pension scheme. — ROBERT McGREGOR AND SONS, LTD., Turnoaks Lane, Chesterfield. Tel.: Chesterfield 7056.

ESTIMATORS REQUIRED for well-established civil engineering and building firm at their head office in Birmingham. Good prospects, bonus and staff pension scheme.—Write in confidence, stating age, experience, and salary required, to Box V.1747, "The Contract Journal."

CIVIL ENGINEERS and ASSISTANTS REQUIRED for contracts in the East Midlands. Preference for those previously employed by contractors. Salary commensurate with experience: participation in superannuation scheme, and ample opportunities for advancement to satisfactory applicants.—Write Box V.1760, "The Contract Journal."

CIVIL ENGINEER

REQUIRED by old-established firm of civil engineering contractors specialising in piling. Preferably under 30. Qualified A.M.I.C.E. and willing to travel. Good prospects for the right man.—Write, with details of experience and salary required, to:

BOX V.1689, "THE CONTRACT JOURNAL."

LIVE SALESMAN REQUIRED for busy office, with experience of contractors' plant. Progressive post. Free pension scheme. Modern house available. References required.—FRED. WATKINS (ENGINEERING), LTD., Coleford, Glos.

SENIOR PLANNING ENGINEER REQUIRED for senior position with large expanding organisation. Candidates preferably qualified and having had at least three years' experience in similar capacity. Apply, stating fullest details, to MARTIN COWLEY, LTD., 112 Jermyn Street, S.W.1.

MARTIN COWLEY, LTD.—We would be pleased to receive applications for suitably qualified Engineers for interesting work on large projects. All grades of staff required.—Apply, stating fullest details, to 112 Jermyn Street, S.W.1.

ACCOUNTS CLERK.—Civil engineering contractors REQUIRE competent senior, able to take books to trial balance, for head office of subsidiary company in N.E. Africa. Good salary, accommodation and leave. Write Box V.1758, "The Contract Journal," quoting Ref. QRS/12.

D. T. BULLOCK AND CO., LTD.

Seek to appoint a CIVIL ENGINEERING ESTIMATOR. This expanding company of civil engineering and building contractors requires a first-rate man experienced in pricing civil engineering and industrial building works up to individual contract values of £250,000. The successful applicant, aged 24-30 years, will be based at head office in Aldridge, and, being responsible to a director of this company, will be required to work largely on his own initiative. Salary and prospects of advancement will be good.—Apply, in writing, to:

Managing Director,
D. T. BULLOCK AND CO., LTD.,
Aldridge, Staffs.

READY-MIXED CONCRETE DEPOT MANAGER.—Applications are invited from young men with suitable training to undertake the duties of Manager in the Leeds area. Company car provided.—Applications, in writing only, giving outline details of career, present position, and salary required, to the Technical Manager, READY-TO-LAY CONCRETE, LTD., 41 Wincolmlee, Hull.

APPOINTMENTS VACANT

QUARRY MANAGER REQUIRED, thoroughly experienced in all aspects of quarry production and costing, and transport organisation.—Write in first instance, by letter, to Box V.1751, "The Contract Journal."

PLANT FOREMAN REQUIRED to take charge of repair, maintenance and running of plant depot. Must be fully experienced in the following plant: Cheshire Highway Earthboring machines; Allis-Chalmers Tractor Shovels; Fiat Tractors. Excellent salary and car supplied.—Apply COLETS EARTHBORING AND PLANT HIRE, LTD., Oreston Lane, Effingham, Surrey. Tel.: Bookham 2506/2472.

CIVIL ENGINEERS for general site duties and supervision REQUIRED on contracts in London and Southern Counties. Permanent pensionable positions with excellent prospects. Candidates must have had previous experience with contractors.—Write, stating age and experience to date, to WILSON LOVATT AND SONS, LTD., 16 Grosvenor Crescent, London, S.W.1.

COMPETENT PILING FOREMAN REQUIRED.—Apply WINTON CONSTRUCTION CO., LTD., Eastgate, Louth, Lincs.

SITE ENGINEERS, between 20 and 30 years of age, are REQUIRED for contracts in the Midlands. Permanent, progressive appointments with superannuation, subsistence and bonus for applicants with at least three years' site experience or graduate status.—Please write in strict confidence to Area Planning Engineer, SIR ALFRED McALPINE AND SON, LTD., 49 Waterloo Road, Wolverhampton.

For Advertisements received too late for classification see page 409

APPOINTMENTS WANTED

AREA AGENT/MANAGER, university education, SEEKS CHANGE with reputable expanding company. Experienced all types building and civil engineering works, including motorways and bridges. Must be progressive position with good prospects. Excellent references. Yorkshire/Lancashire areas preferred.
Write Box W.1714, "The Contract Journal."

COMPANY ACCOUNTANT (Inc.), with several years' experience of contractors' work overseas, DESIRES to hear of a SUITABLE VACANCY ABROAD.
Write Box W.1710, "The Contract Journal."

SENIOR Q.S./TAKER-OFF, takes lead building and civil engineering S.M.—I.C.E. and R.I.C.S. Four nuclear power station projects. Free May/June. Contract appointment, London-Kent. Basic £2,000 p.a.
Write Box W.1761, "The Contract Journal."

CIVIL ENGINEER, 33, B.Sc., A.M.I.C.E., three years' design, nine years' site exerience as engineer or agent on roads, sewers, bridges, reinforced concrete and industrial buildings, interested in estimating and preplanning, SEEKS APPOINTMENT in head office of north-west contractor.
Write Box W.1744, "The Contract Journal."

PLANT MANAGER REQUIRES POSITION of responsibility with civil engineering company. Fully experienced in control of mechanical plant, supervision of site servicing, operators, workshop repairs and stores. Sound administrator and keen costs man. Resident London area.
Write Box W.1732, "The Contract Journal."

REPRESENTATIVE and CONTACTS MAN with connections in London and Home Counties SEEKS POSITION with progressive company. Experience covers sales, hire and earthmoving. Resident S.W. London.—Write Box W.1733, "The Contract Journal."

CHARTERED CIVIL AND STRUCTURAL ENGINEER, 36, with wide experience on heavy civil engineering and building construction work at home and abroad with consultants and contractors (reinforced concrete and heavy foundations especially, wishes to OBTAIN APPOINTMENT in or near London or abroad.
Write Box W.1766, "The Contract Journal."

ENGINEER, CONTRACTS MANAGER, qualified, fully experienced estimating and running of contracts, used to control, DESIRES SIMILAR POSITION or PARTNERSHIP in progressive small/medium firm.
Write Box W.1767, "The Contract Journal."

BORED PILING. — ENGINEER SEEKS SENIOR EXECUTIVE POST with progressive organisation. Good salary and prospects essential.
Write Box W.1779, "The Contract Journal."

WORK REQUIRED

FOR HIRE IN MIDLANDS, new Blaw Knox PF90 PAVING MACHINES, complete with experienced operators (and gang) if required. Sub-contract work or price per ton for material laid (Macadam, Asphalt, Wetmix, Leanmix Concrete, etc.).—For full details, apply: CAMMIDGE ROAD CONSTRUCTIONS, LTD., 14/26 Henrietta Street, Coventry. Tel.: Coventry 88473.

WANTED, HIRE or CONTRACT WORK for modern fleet of DW21s, D9s and D8s. Apply: BRODERICK AND RYAN, LTD., 421 Nottingham Road, Ilkeston, Derby. Tel.: Ilkeston 4381/2.

ALLEN OXFORD GRADERS for HIRE. GRASSPHALTE, LTD., Hampton Hill, Middlesex. Telephone: Molesey 4343.

BULK EXCAVATIONS, any quantity quoted for. Own plant and lorries.
COFF AND SON (EXCAVATIONS), LTD.,
Buckhurst Hill, Cheapside, Ascot, Berks.
Ascot 1026/7/8.

WANTED. EXCAVATION, SITE CLEARANCE and DEMOLITION WORK.
R. BARKER (PECKHAM), LTD., New Cross 3337.

MOTOR BOAT OWNERS REQUIRE CONSTRUCTIONAL WORK, ATTENDANCE, PERSONNEL, GOODS, TOWAGE, etc. Craft and labour supplied.—Apply: THOMAS BROS., 62 Sussex Road, East Ham, London, E.6. Telephone: GRA. 6697/3151.

SITE CLEARANCE, BULK EXCAVATION. JANES AND CO., LTD., Trading Estate, Slough. Telephone: Slough 20361—Ext. 4.

SAM BOOTH, LTD., Perrymount Chambers, Haywards Heath, Sussex. Tel.: Haywards Heath 1126 and 1258. SUB-CONTRACT or HIRE: D9s, with Bulldozer and Caterpillar 463 Scrapers.

CRANE HIRE.—May we QUOTE? Motor Scrapers, Traxcavators, Excavators, Bulldozers, Cranes supplied on HIRE or CONTRACT.—GRANGE PLANT, LTD., Honiton, Devon. Tel.: Broadhembury 330-355.

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EARTHMOVING, LEVELLING, LAND DRAINAGE, RECLAMATION, etc. Consult the Surface Specialists. — SURFACE MAINTENANCE SERVICES, LTD. 124 Old Christchurch Road, Bournemouth. Tel. 24673. Branches throughout the country.

IF TREES, ROOTS or UNDERGROWTH feature in your contract, we would be pleased to quote for their ECONOMICAL DISPOSAL.
BAGSHOT SAWMILLS, LTD.,
32 London Road, Camberley, Surrey. Telephone 14.

FOR HIRE, One Drott and Six TIPPER LORRIES. SITE CLEARANCE. Direct or sub-contract. J. W. DOYE AND CO., Demolition Contractors, 188 Plumstead High Street, S.E.18. Woolwich 6318.

UPROOTING.—TREES, STUMPS, HEDGES, etc. We have the most experience and all modern equipment.—T. GRAVESON, LTD., Warton, Carnforth, Lancs. Tel.: Carnforth 381 and 382.

IF GRADING, SEEDING, TURFING and PLANTING form part of your CONTRACT, we will be pleased to quote you.—HOLDRUP, 139 Bells Hill, Barnet. Telephone 9111.

SHOTBLASTING CAPACITY available for Cement Mixers, Skips, Hoppers, etc. — MABEY AND JOHNSON, LTD., Marshmoor Works, Hatfield. Tel.: Hatfield 4122.

BULK EARTHMOVING, OVERBURDEN STRIPPING, EXCAVATIONS for roads, airfields, etc., with large fleet of Caterpillar D8 and D7 Tractors. Keenest prices for work anywhere in the country.—CONTRACTORS' PLANT HIRING CO., LTD., Barkby Road, Leicester. Tel.: Leicester 66631 (4 lines). NORTHERN REPRESENTATIVE: 91 Shaw Road South, Shaw Heath, Stockport. Telephone: STOckport 3082.

EARTHMOVING in south-west carried out by modern fleet of machines—hire or contract. Traxcavators, motor scrapers, bulldozers, excavators and mobile cranes.—GRANGE PLANT, LTD., Honiton, Devon. Telephone: Broadhembury 330-355.

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EXCAVATION SUB-CONTRACTS. Technical staff available to analyse, programme and price complex projects. Particular attention given to finish and compaction. D9, D8, TD18 and TD14 Scrapers, Excavators, Loading Shovels and Lorries available with competent and imaginative supervision for execution of work.—DICK HAMPTON, Broadview Farm, Blacknest, Alton, Hants. Tel.: Bentley 2241.

SPECIALISED EXPLOSIVES SERVICES.—U.K. and OVERSEAS MOBILE UNITS coverage on ex-service strong points, sea walls and dangerous structures, etc.—124 Old Shoreham Road, Southwick, Sussex. Tel.: Southwick 3791 or Shoreham 4193.

CONTROLLED EXPLOSIVES, LTD., specialise in the fragmentation of mass and reinforced concrete inside or outside buildings. Demolition of bridges and chimneys, mass rock, trenching, sewage beds, engine beds, etc., and deep drilling for quarries. Particulars from 11 Church Street, Oldbury, Birmingham. Telephone: BROadwell 3117.

EARTHMOVING, EXCAVATION, CONTRACT or HIRE. Bulldozers, Scrapers, Traxcavators, Trenchers, etc.—'Phone: Chiswick 8511/2, Maidstone 7294/5/6, TRACTORS HIRE (CHISWICK), LTD., 300 Chiswick High Road, W.4.

BULK EARTHMOVING, direct contract or sub-contract. Also BULLDOZERS and SCRAPERS for HIRE.—FRANK R. WALPOLE, LTD., 126 Wing Road, Leighton Buzzard, Beds. Leighton Buzzard 3351.

BULK EXCAVATIONS and SITE WORKS undertaken. DIRECT or on SUB-CONTRACT basis. Quotations given for large or small contracts anywhere.—S. AND L. BULL BROS., LTD., 126A High Street, Winchester. Telephone: Winchester 2264.

ERECTION and DISMANTLING. Structural Steelwork and all types of Prefabricated Components. Speedy and efficient service.—ERECTORS, 80 Bulwell Crescent, Cheshunt, Herts. Waltham Cross 22564.

EXCAVATIONS, SITE CLEARANCES, DEMOLITION and PLANT HIRE, SUB-CONTRACT WORK WANTED, any area. — D. W. STONE, LTD., St. Leonards Road, Hove, 3, Sussex. Tel.: Hove 46396.

WANTED, SUB-CONTRACT, labour only, in London and Home Counties, for all types of CIVIL ENGINEERING WORK. Fair rates, good service, reliability. Write Box X.1768, "The Contract Journal."

BULK EARTHMOVING, direct contract or sub-contract. Also BULLDOZERS and SCRAPERS for HIRE.—FRANK R. WALPOLE, LTD., 126 Wing Road, Leighton Buzzard, Beds. Leighton Buzzard 3351.

DIVING

DIVERS IMMEDIATELY AVAILABLE. Welding, cutting, construction, etc. Any part of world. UNDER WATER WELDERS AND REPAIRERS, LTD., Cardiff. Tel. 29631. (After hours: Penarth 58131.)

COMPLETE CONTRACTS UNDERTAKEN, including the following: Design, Survey, Craft available, Pile Driving, Compressors, Cement and Grouting Machinery, Underwater Cutting, Welding, etc., etc. Divers and Plant hired if preferred. Rates from £7 7s. per day. Immediate and efficient teams available anywhere in the world. Qualified marine surveyor on staff.—For Diving Contracts, consult: THE MARTIN WELDING AND CUTTING CO., LTD., Dartford, Kent. Tel.: (day) Dartford 24139; (night) Farningham 2452.

INVENTIONS

INDUSTRIAL ENGINEERS OF REPUTE invite, in strict confidence, DETAILS of INVENTIONS with object of manufacturing and world distribution. Write Box K.L.517, "The Contract Journal."

REPRESENTATIVES

OUTSIDE REPRESENTATIVE WANTED by London plant company, mainly for London and Home Counties. Must be fully experienced and should preferably have existing connection.
Write Box X.1756, "The Contract Journal."

DIRECTORSHIP

CHARTERED CIVIL ENGINEER, with the highest qualifications, OFFERS SERVICES to firm in South Lancs. or North Cheshire requiring a TECHNICAL DIRECTOR.
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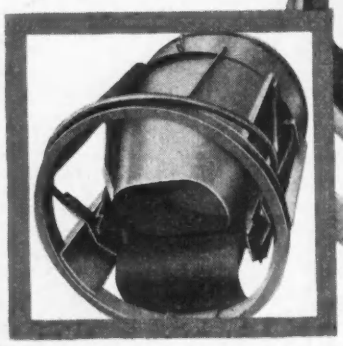

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GLAMORGAN COUNTY COUNCIL.

HIGHWAYS ACT, 1959—PRIVATE STREET WORKS.

TO PUBLIC WORKS CONTRACTORS.

The Glamorgan County Council invite SEPARATE TENDERS for the MAKING-UP of the FOLLOWING PRIVATE STREETS:—

(1) Highwalls Avenue (Part), Dinas Powis, the principal works comprising:—
Carriageway Surfacing, 580 sup. yd.
Footways, Foundation and/or Surfacing, 225 sup. yd.
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General Conditions of Contract and Drawings may be seen at the Offices of the County Surveyor during normal working hours.

Contractors will be required to pay the recognised rates of wages and to observe the recognised hours of labour.

Sealed Tenders, made out on the prescribed form and accompanied by the priced Bill of Quantities, are to be delivered, in the envelope provided, at the County Hall, Cardiff, by First Post on the 25th MAY, 1960, and addressed to the Clerk of the County Council.

The Council will not necessarily accept the lowest or any Tender.

RICHARD JOHN,
Clerk of the County Council.

Glamorgan County Council,
County Hall,
Cardiff.
28th April, 1960.

BOROUGH OF NEATH.

TO SURFACE DRESSING CONTRACTORS.

TENDERS are invited for the SURFACE DRESSING of approx. 45,000 sq. yd. of ROADS in the Borough.

Form of Tender and Specification can be obtained from the Borough Engineer, Gwyn Hall, Neath. Tenders, in sealed envelopes, endorsed "Surface Dressing," bearing no mark which will identify the sender, are to be received by me not later than FRIDAY, 6th May, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

D. KING DAVIES,
Town Clerk.

Town Hall,
Neath.

POPLAR BOROUGH COUNCIL.

TENDER FOR TOWELS.

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CONCRETE ENGINEER or CHEMIST REQUIRED to take technical control of quality of large quantities of ready-mixed concrete in Liverpool area. Applicant must have had experience in concrete laboratory testing procedures and trouble shooting in the field. To a man with drive and initiative this permanent position offers unique opportunities. World-wide company in an expanding industry.—Reply in confidence to Technical Director, READY MIXED CONCRETE, LTD., 2/3 The Sanctuary, London, S.W.1.

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(c) Tiled Fireplace Surrounds.

Specifications and Forms of Tender may be obtained from the Borough Engineer and Surveyor.

Tenders, in the official envelopes provided, must be delivered to the undersigned by 21st MAY, 1960.

KEITH LAWDER,
Town Clerk.

Civic Centre,
Dagenham.

BOROUGH OF HENDON.

ASHLEY LANE, HENDON.

The BOROUGH COUNCIL invites TENDERS for the CONSTRUCTION of FOOTPATH and works incidental thereto in ASHLEY LANE, N.W.4 (from Ashley Close to Oakhampton Road).

The Form and Conditions of Tender, Specification and Bills of Quantities will be issued by, and Plans may be inspected at the Offices of, the Borough Engineer and Surveyor, to whom applications for the documents must be made not later than 16th MAY, 1960, accompanied by a deposit of £2 2s., which will be returned on receipt of a bona-fide Tender on the form provided, and not subsequently withdrawn. Cheques should be made payable to Hendon Corporation. Tenders must be received by 30th MAY, 1960.

This invitation to tender is subject to certain terms and conditions, particulars of which will be forwarded to each tenderer.

R. H. WILLIAMS,
Town Clerk.

Town Hall,
Hendon, N.W.4.

BOROUGH OF HENDON.

WISE LANE, N.W.7.

The BOROUGH COUNCIL invites TENDERS for WISE LANE IMPROVEMENT—Page Street to Milespit Hill, Mill Hill, N.W.7.

The Form and Conditions of Tender, Specification and Bills of Quantities will be issued by, and Plans may be inspected at the Offices of, the Borough Engineer and Surveyor, to whom applications for the documents must be made not later than 16th MAY, 1960, accompanied by a deposit of £2 2s., which will be returned on receipt of a bona-fide Tender on the form provided, and not subsequently withdrawn. Cheques should be made payable to Hendon Corporation. Tenders must be received by 30th MAY, 1960.

This invitation to tender is subject to certain terms and conditions, particulars of which will be forwarded to each tenderer.

R. H. WILLIAMS,
Town Clerk.

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(6) SITE ENGINEERS, Senior and Juniors, for site work in the Home Counties, capable of setting out, measurement for interim and final accounts, and to assist with rate administration. Previous site experience with contractors essential.

(7) GENERAL FOREMAN to take charge of small and medium-size contracts or to work under agents on larger contracts. Must be fully experienced in all types of civil engineering works, including roads, sewers, bridges, water mains, etc.

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EXPERIENCED ASSISTANT to Plant Manager REQUIRED. — Apply in writing, stating full qualifications, to Office Manager, CUBITTS FITZ-PATRICK SHAND, Doncaster By-pass Contract, Warmsworth, Doncaster.

EXPERIENCED GENERAL FOREMEN REQUIRED for speculative housing by large firm of developers in the Birmingham, South Midlands and South Wales areas. These are permanent, pensionable positions for suitable applicants.—Write, in confidence, stating age, experience, past and present employers, to Box V.1776, "The Contract Journal."

SENIOR QUANTITY SURVEYOR REQUIRED for employment with Cumberland builders. Experience of final accounts and estimates. House available. Write, giving full details of experience and qualifications, and state salary required, to Box V.1715, "The Contract Journal."

COUNTY BOROUGH OF IPSWICH.

BITUMEN SPRAYING OF VARIOUS ROADS.

TENDERS are invited for the SPRAYING of VARIOUS ROADS in the Borough with REFINED BITUMEN; the total quantity required to be supplied and sprayed is approx. 18,000 gallons.

The relevant documents may be obtained from the Borough Surveyor, 19 Tower Street, Ipswich.

Tenders, in plain sealed envelopes bearing no name or mark to indicate the sender, but endorsed "Tender for Bitumen Spraying of Roads," must be received by me not later than First Post on MONDAY, 16th May, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

J. C. NELSON,
Town Clerk.

Town Hall,
Ipswich.

BOROUGH OF MITCHAM.

TENDERS are invited from experienced contractors for the RESURFACING and RECONSTRUCTION of sections of LONDON ROAD (A.217).

Documents may be obtained from the Borough Engineer and Surveyor, Town Hall, Mitcham, Surrey, at whose Office the General Conditions of Contract may be inspected.

Tenders must be delivered to the undersigned, in the envelope provided, by 12 Noon on the 12th MAY, 1960.

The Corporation do not bind themselves to accept the lowest or any Tender.

R. H. WHITE,
Town Clerk.

Town Hall,
Mitcham.
22nd April, 1960.

CITY OF PORTSMOUTH.

NEW FITTING-OUT BERTH—INNER CAMBER.

TENDERS are invited from contractors experienced in piling and dock construction for the ABOVE CONSTRUCTIONAL WORKS, consisting of a 15in. Reinforced Deck 150ft. by 45ft. supported on Piles approx. 60ft. long, a Retaining Wall, Dredging, and incidental works.

Tender documents may be obtained from the City Engineer, 1 Clarence Parade, Portsmouth, on payment of a deposit of £2 (Two Pounds), which will be refunded upon the receipt of a bona-fide Tender and/or the return of all the documents.

Tenders, enclosed in the envelope provided, must be delivered to the undersigned not later than Noon on WEDNESDAY, 25th May, 1960.

V. BLANCHARD,
Town Clerk.

CIVIL ENGINEERING contractors seek to appoint the following: (a) A SENIOR QUANTITY SURVEYOR: This is a key appointment, permanent and pensionable, which offers considerable scope for the applicant with initiative and imagination. The successful applicant will be in charge of the quantity surveying department at head office and will be responsible for the preparation of interim and final accounts for general civil engineering and building contracts. A car will be provided, but the position will not involve living away from home, and should therefore appeal to those applicants with considerable site experience who now wish to establish themselves in one area. Applicants should be aged between 35 and 45. (b) An ASSISTANT QUANTITY SURVEYOR: This, again, is a permanent and pensionable appointment. A car will be provided, but the position will not involve living away from home. Applicants should be aged between 25 and 35.—Generous salaries are offered for both appointments, and applicants should apply in writing, giving details of experience and present salaries, to Chief Engineer, CLUGSTON CAWOOD, LTD., St. Vincent House, Normanby Road, Scunthorpe, Lincs.

SUB-AGENT REQUIRED for road and sewer works in Sussex. A permanent, pensionable, progressive post awaits a man with a good grounding in this type of work. The successful applicant will be expected to live in the area and transport will be provided to take him round his work. This is a progressive, expanding firm and there are good prospects for someone with drive and initiative.—Apply in writing, giving full details of training and experience, to GERALD TOYNBEE (CONTRACTORS), LTD., Barnham, near Bognor Regis, Sussex. Tel.: Eastergate 3323.

COST AND BONUS SURVEYORS REQUIRED for site work in London area. Previous experience of measuring, calculation of bonus from labour targets essential. Attractive salaries and profit-sharing bonus to right men. Subsidised travel. Superannuation and share investment schemes in operation.—Write fully, stating age, experience and present salary, to Personnel Manager, WATES, LTD., 1258/60 London Road, Norbury, S.W.16.

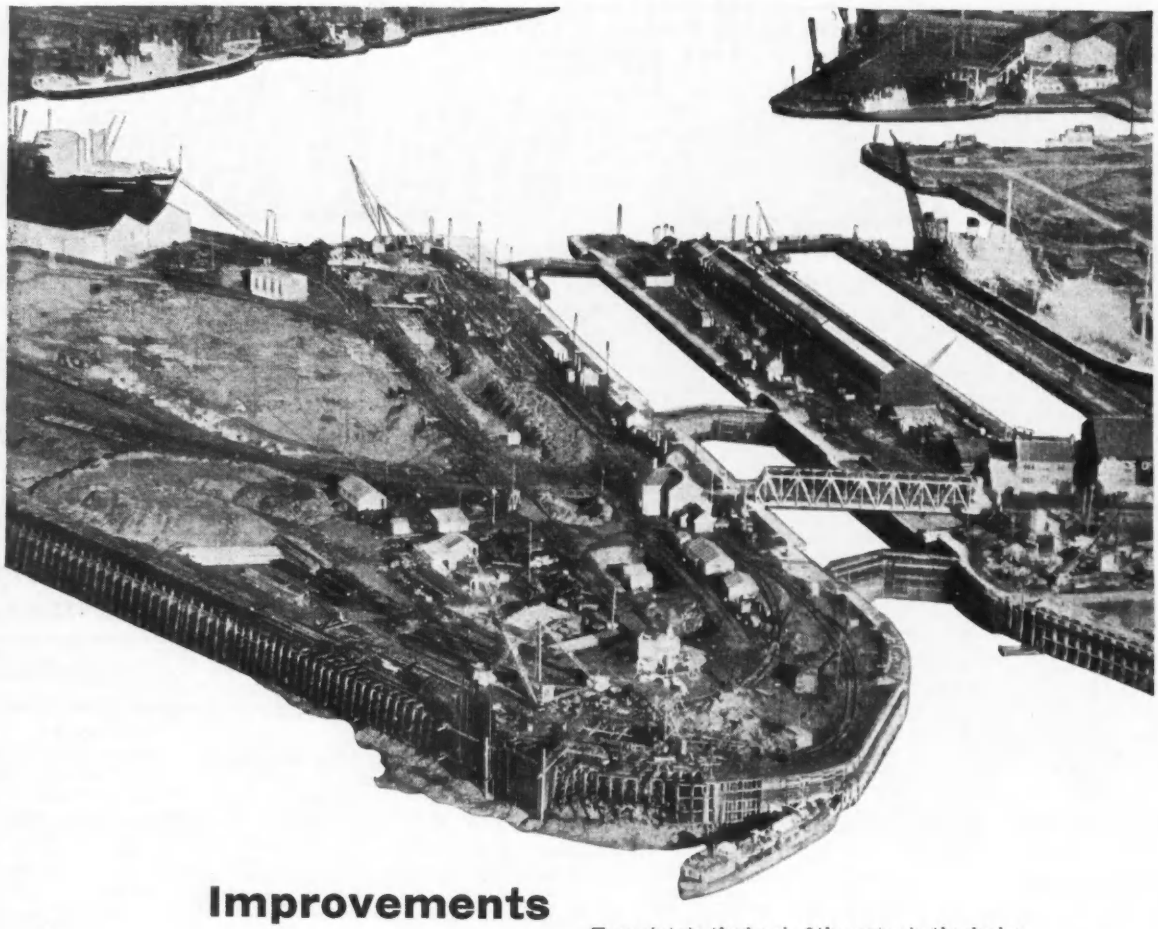
SERVICE ENGINEER, preferably with experience in mobile cranes or similar plant, for (1) the South Lancashire area; (2) the Glasgow area; (3) the Midlands. Permanent staff appointment after trial period. Write, giving details of experience, to The Secretary, RANSOMES AND RAPIER, LTD., P.O. Box 1, Ipswich.

SERVICE ENGINEER, preferably with experience in excavators or similar plant, for (1) the Midlands, and (2) the South of England. Permanent staff appointment after trial period.—Write, giving details of experience, to the Secretary, RANSOMES AND RAPIER, LTD., P.O. Box 1, Ipswich.

QUANTITY SURVEYOR.—Applications are invited from fully trained Quantity Surveyors for work on site in Cumberland in connection with civil engineering and reinforced concrete construction, for a period of 12 months from August. High salary will be paid to the right applicant.—Write Box V.1786, "The Contract Journal."

PLANT MANAGER REQUIRED for civil engineering and building contractors. Applicants must be able to prove successful background with the larger type of contractor in a senior executive position. Applicant with engineering degree or qualification preferred. Must be familiar with all types of civil engineering equipment and experienced in designing plant layouts and special equipment for all types of projects. This appointment offers scope for experienced and ambitious Plant Manager, able to run a large department in liaison with senior technical staff.—Written applications, stating fullest details, together with an indication of salary required, to Box V.1789, "The Contract Journal."

ASSISTANT QUANTITY SURVEYORS REQUIRED for general road works. Southern area. Experienced in site measuring and final bills. Good progressive positions. Staff pension scheme. — Write, giving age, experience, and salary required, to Box V.1771, "The Contract Journal."



Improvements to Swansea Docks Entrance

To maintain the level of the water in the docks at Swansea, Costains are building for the British Transport Commission a pumping station which will be equipped with two Sulzer electrically operated pumps, each with a capacity of 100,000 gallons per minute.

After pumping, the water will be delivered over a syphon and into a surge chamber, whence it will travel through approximately 1,200 ft. of twin reinforced concrete 8 ft. square culverts, and will discharge into the dock underneath a new wharf. The steel piling of the roundhead near the entrance is also being renewed and this will incorporate the intake to the pumps.

The resources in experience and skill which are going into this operation are available to every Costain client.

A view of the underside of the suction flare of one of the main pumps below which is a reinforced concrete precast anti-vortex baffle.

Civil Engineer, South Wales Docks: R. H. EDWARDS, E.R.D., M.I.C.E.
Consulting Engineers: RENDEL, PALMER & TRITTON

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LAWRENCE McCARTHY

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Advertisement rates may be obtained on application to R. Binfield, Advertisement Manager.

THE CHANNEL TUNNEL: IS IT WORTH IT?

FROM a technical point of view, the best means of linking Great Britain and France would be, in the first stage at least, a railway tunnel, bored or immersed, which would at the same time provide adequate and convenient transport facilities for cars, coaches and lorries. It would cost about £109m. of which about £29m. would be required to cover the cost of installations, terminals and rolling stock. This is the main conclusion of the Channel Tunnel Study Group which has now presented its report to the British and French Governments.

Pointing out that a Channel tunnel is now a practicable proposition both technically and financially, the Group states that within the framework of private financing the most realistic approach would be twin railway tunnels comprising a shuttle service ensuring rapid transit of motor cars. The tunnels, 32 miles long, would at peak periods enable cars to cross the Channel in 35 minutes at a rate of 1,800 cars per hour, and at an average speed of 60 m.p.h.

During its two and a half years' work the Group has done much valuable research into the technical and economic problems of a Channel tunnel. The section of the report dealing with the technical studies which appears elsewhere in this issue will not only interest but doubtless whet the appetite of engineers and contractors. On the economic side however there must be grave doubts as to the value of such a venture.

Although private finance will be involved there is little doubt that the British and French taxpayers would be called upon to find a large amount of capital and carry some pretty big risks. Public money, many will feel, should not be used on a scheme the value of which must be questioned in the light of expected technical developments, for instance, in aviation.

Even if the two Governments concerned gave a fairly quick decision some considerable time must elapse before the proposed tunnel could become operational; at least five years would be required for construction. And one must ask how much reliance can be placed on these long-term forecasts of costs and traffic which even if proved reasonably accurate would mean that the project would be no money spinner.

Although we would like to see engineers and contractors being given an opportunity to tackle such an engineering venture we cannot help feeling that the public money which would have to be spent by British Railways and the Government could be put to better use in developing the railway and road system of the country.

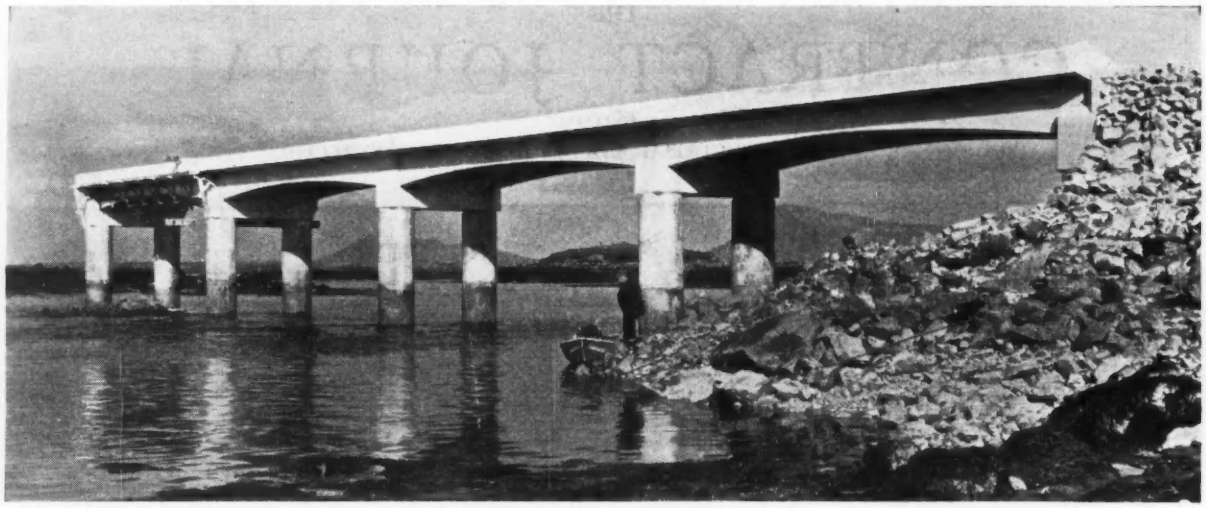
World Bank Activity

THE World Bank, which was set up in 1947 and is the largest single source of long-term capital outside the Iron Curtain, has been progressively stepping up its advances. According to the *G.E.C. Export Gazette* its loans in the last two years have exceeded $700m. annually—though actual disbursements have been considerably less than this—and so far without a single defaulter among debtors.

Although some of its early post-war loans were granted to assist in the reconstruction of Europe, the Bank's more recent aid has been to those less-developed countries which may find it difficult to obtain capital in the open market. The largest single borrower has been India, and Pakistan, Mexico, Rhodesia, Brazil and the Congo have also benefited substantially.

A considerable portion of the Bank's loans in 1958/59 were devoted to the improvement of transport in Africa, Asia and Latin America. Consideration is currently being given to a scheme to harness the upper waters of the Indus for irrigation. This will require close collaboration between India and Pakistan, which the World Bank has been instrumental in engendering.

The growing interest in international aid for poorer regions in the last 18 months has had two effects. First, the members of the Bank agreed, in 1959, to raise the Bank's total capital to $11,000m. which increased the potential reserves. Second, a new body, the International Development Association, is to be launched late in 1960 with an initial capital of $1,000m. to assist such projects as the World Bank could not support. This extension of activity will, it is hoped, provide further overseas opportunities for British consulting engineers and the construction industry.



Bridge No. 1, taken from west side

HEBRIDEAN ISLANDS LINKED BY 5-MILE ROADWAY

Construction of the North Ford Causeway

IN the autumn of this year it will be possible for the first time ever to travel by wheeled vehicle between the Hebridean islands of North Uist, South Uist and Benbecula. By that time work will be complete on the £650,000 North Ford Causeway.

The islands of North and South Uist and Benbecula are the three largest forming the southern part of the chain of islands in the county of Inverness, known as the Outer Hebrides. They are separated by shallow stretches of water which mainly dry out at low tide leaving large expanses of sand with the water confined to a few deep channels.

Until recently the only means of communication between these islands has been by small boat at high tide or by horse or, more recently, by tractor at low tide. The latter is only possible for about two hours at each tide and in winter storms can prevent a crossing being made for days at a time. The increasing use of air travel has emphasised the delays, especially as the B.E.A. planes land on Benbecula only.

The difficulty of crossing between Benbecula and South Uist was overcome when the South Ford Bridge was opened in 1940, but the longer and more dangerous crossing of the North Ford from Benbecula to North Uist remained. Various proposals were put forward by Inverness County Council for dealing with the North Ford and in September 1957 construction of the causeway started.

The arrangement finally adopted requires the construction of nearly five miles of new road. More than one mile of this on a rock causeway built on the sand between high and low water marks and the remainder is either on the mainland of North Uist or on a succession of small islands lying between North Uist and Benbecula. Three bridges are incorporated in the causeway sections.

Although it is only two miles across by a direct route the somewhat longer route was chosen not only on account of cost but also because it brings another 350 people living in the area into the islands road system.

The new road starts at Carinish on North Uist and runs in an easterly direction across a peat-covered moor for about one mile and then through a number of crofts forming part of the townships of Clett Feora and Knock Cuien. The thickness of peat encountered on this section of the road was considerable reaching 18ft. at one point.

From Knock Cuien the road turns southwards, leaves the mainland of North Uist and is formed by short length of causeway between small islands and one longer stretch of causeway about ¼ mile long to the north west corner of the island of Grimsay.

A bridge is included in the longest stretch. This has three spans of 30ft. each and is supported on concrete piles driven down to rock. The deck of the bridge is reinforced concrete and is supported by steel beams.

This part of the causeway was the first section to be constructed and from the experience gained here the method of construction was changed. In the original method the rockfill embankment was formed by end tipping but this method

Knockqueen. Causeway section between Aird-a-Mhaide and Eilean Steaphain

resulted in considerable scouring of the sand by the tidal currents immediately ahead of construction.

At Grimsay the road turns south-west and crosses more small islands to the most exposed section of the causeway and on to Benbecula. This section is about ½ mile long across the sea and for a considerable stretch the embankment is 15ft. high. To prevent scouring occurring it was constructed in three stages. First a filter layer was laid on the sand and kept 200ft. to 300ft. ahead of the rockfill, then rockfill was tipped to a level +3ft. above mean sea level and finally brought up to road level. The sides of the causeway are protected by stone pitching and in addition there is heavy beaching at the toe of the embankment. Rock for the construction of the causeway was won from a quarry on Gairbh-eilean, one of the small islands between Knock Cuien and Grimsay.

Bridges are provided at each end of the main causeway section. At the Benbecula end there is a bridge of four spans of 45ft. each to provide a navigational opening for fishing boats and other small craft. The clear headroom at high spring tides is 8ft. 4in.

The bridge is supported on concrete piers formed by sinking 7ft. diameter concrete pipes down to rock through the overlying sand and shingle. They were cleaned out by a diver, holes were drilled into the rock and steel bars were grouted in to fix the piers firmly in position. The pipes were filled with concrete to low tide level and from this level the piers are formed from smaller diameter concrete pipes filled with concrete and suitably reinforced.

The bridge deck is reinforced concrete and supported by steel girders which are completely cased in concrete to protect them from corrosion. To allow for expansion and contraction of the bridge deck due to temperature changes it is supported on rubber pads at each pier and abutment. Sand for mixing concrete had to be brought from Onich on Loch Linnhe as the local sources of suitable sand were inadequate.

At the other end of the main causeway section there is a third bridge with one 45ft. span and supported on mass concrete abutments founded on rock.

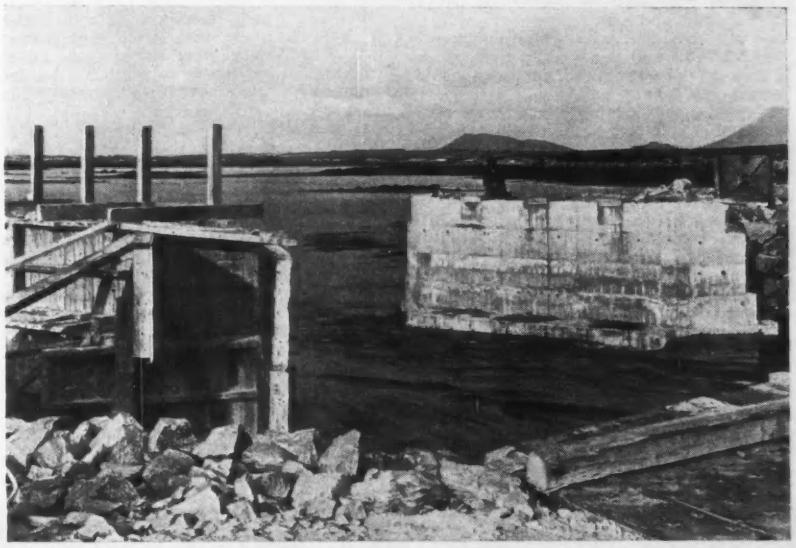
The finished road surface is 10ft. wide and passing places are provided about every 200yd. In addition on the causeway sections pedestrian refuges are provided every 50yd. and there are continuous parapets each side to give protection from the weather.

The opportunity is being taken while there is plant and equipment available on the island to construct a short branch road starting at Knock Cuien and going for about one mile to Claddach Carinish.

Up to 80 men have been employed on the construction and of these 50 are local men from North Uist and Grimsay and the remainder brought in from outside.

The work is being carried out for Inverness County Council by Wm. Tawse and Co., Ltd., Aberdeen. The consulting engineers are Sir Alexander Gibb and Partners, 43 Northumberland Street, Edinburgh, 3, and the county surveyor is Mr. David Hamilton, A.M.I.C.E., M.I.Mun.E.

Bridge No. 2, south abutment in foreground, showing R.S.Js. in position



Bridge No. 3, showing north abutment and shuttering to south abutment

Looking eastward at the section of the causeway between Eilean Steaphain and Gairbh-Eilean. Embankment at formation level

A LAWYER CONSIDERS . . .

Building Safety Regulations—A Heavy Liability

A FURTHER case arising out of an alleged breach of the Building (Safety, Health and Welfare) Regulations has been reported, *Westcott v Structural and Marine Engineers, Ltd.* [(1960) 1 All E.R. 775].

The facts were that W, a chargehand steel erector, was sent by his employers to an R.A.F. station in charge of the demolition of two steel chimneys connected to boiler houses and the re-erection in their place of two similar chimneys. These chimneys were tall structures each standing on a conical base which was attached by bolts to the concrete roof of the boiler house, a square brick structure. The bolts were sunk in the concrete and stood up some 2ft. above the concrete passing through lugs in the conical base. The first part of the construction was to bolt the new conical base on to the concrete roof of the boiler house and the old bolts and the old nuts were used for this purpose. At the time of his accident W was standing on this concrete roof which was some 11ft. above the ground and was trying to tighten up the nut on a bolt with a Stillson wrench. W had borrowed this wrench from an Air Force engineer because the spanner his employers had supplied was not big enough to engage the nuts. This wrench is an adjustable spanner more usually used for pipe-work and, to get a greater leverage, W used a bit of tubular pipe which he put over the handle of the wrench. This pipe was about 2ft. 6in. long so that, together with the top part of the wrench, the implement was some 3ft. long. W's own account of the accident was that he was working with a man called R and that R was putting the wrench on the nut and W was pulling towards him on the wrench with his back to the northern edge of the roof of the boiler house where there was a flat roof about 1ft. long. W said that he had one foot on the flat roof and one foot on the concrete on which the conical base was resting. W pulled hard on the wrench and fell over backwards landing on a railway bogie below and injuring himself. R in his evidence said that it was he, R who was pulling on the wrench; that the wrench was put on the nut at an angle of 90 degrees to the circumference of the conical base; that he, R, with his back to the base, pulled while W pushed and that something then gave way, probably the wrench slipped on the nut, or the bolt moved in the concrete, causing W to be thrown off balance and pitched head first over the edge of the boiler house.

On these facts W sued his employers, firstly, for breach of their common law duty to take reasonable care for his safety by not providing a suitable tool for this essential part of the job on which he had been sent, by allowing him to use a Stillson wrench and by requiring him to work at the edge of a drop of 11ft. without taking precautions to prevent him falling. The Lord Chief Justice, Lord Parker, held that this common law claim failed. Although a better tool than a Stillson wrench might have been supplied or obtained for the job there was nothing dangerous or unsafe in the use of a Stillson wrench.

W also sued his employers on the quite separate ground of breach of the statutory duty owed to him by his employers under Regulations 5 and 24 of the Building Safety Regulations. Regulation 5 provides that "Suitable and sufficient scaffolds shall be provided for all work that cannot safely be done on or from the ground. . . ." Lord Parker, however, felt this was work which could be safely done without scaffolding and thus there was, in these circumstances, no duty on the employers under the Regulations to provide a scaffold.

Regulation 24 provides in paragraph (1) that, subject *inter alia* to paragraph (5), "every side of a working platform or working place, being a side thereof from which a person is liable to fall a distance of more than 6ft. 6in., shall be provided with a suitable guard-rail or guard-rails . . . ." Now quite clearly where W was was a "working place" and so prima facie there was an obligation to provide a guard rail. The only doubt arose because this obligation was subject to paragraph (5) which provides that paragraph (1) does not apply to a "temporary platform." Lord Parker was, however, unable to describe where W was standing as a "temporary platform" as he did not feel that that phrase was meant to apply to a fixed structure, part of the building, which is being used as a working place for the time being. Paragraph (1) therefore applied to this operation and the paragraph is so phrased that it makes the obligation to provide guard-rails an absolute one. Lord Parker therefore held that there was a breach of Regulation 24 and went on to say: "I confess that I come to that conclusion with some reluctance because it seems to put a very severe burden on employers in a case such as this but those who sit in these courts are constantly coming across cases under the regulations where such a harsh burden is put on employers. Often the obligation is qualified by words such as whether it is 'reasonable' or 'reasonably practicable'. There is no qualification here; it is an absolute obligation. Accordingly, in my judgment, these employers were in breach of the statutory duty imposed by Regulation 24."

Lord Parker then went on to consider if the damages should be reduced because of any contributory negligence by W. Accepting, as he did, R's version of the accident Lord Parker felt that all that could be alleged by way of contributory negligence was that W pushed too hard. On W's version of the accident it could perhaps be said that it was unsafe for W to turn his back on the side of the tower so that if anything did happen he would go over backwards; but on this Lord Parker commented, "One must bear in mind that these regulations are to save workmen against themselves and although everyone realises that there is a risk of any spanner slipping while engaged on a job no workman could be expected to go through the mental process of saying 'If, which does not by any means happen in the ordinary run of affairs, the spanner does slip, then I must be in a position where I shall not fall.' It seems to me this is much more akin to the ordinary case of inadvertence, having regard to the fact that the men are working there and that although spanners do slip, it is not a matter which does happen frequently." Lord Parker therefore found that W was not in any way contributorily negligent and the employer must therefore pay the whole of the damage suffered by W. Employers will note somewhat ruefully that while in this case their conduct is judged by absolute standards when it comes to considering the employees' conduct a far more lenient rule is adopted.

With the greatest respect Lord Parker's judgment in this case must cause some comment. It will be noted that he refers to the *absolute* obligation in Regulation 24 on the contractor to provide working places with a fall of more than 6ft. 6in. with guard-rails. True of course, it is an absolute obligation but then the Regulations are part of the criminal law. There is an increasing tendency nowadays for the creation of criminal offences where the offence is the actual criminal act regardless of the intention of the person committing it; the intention or the motive are merely grounds for mitigating the penalty not for deciding whether or not the crime has been committed. Now Regulation 24 is one of these absolute obligations and failure to carry it out is a criminal offence. But this case is not a criminal prosecution but a civil action for damages and this talk of absolute obligations is not entirely in place in such a context.

Then Lord Parker does not seem to have been referred to those recent cases in which, despite a criminal breach of the Safety Regulations, an employer has not been held liable for damages to the employee. Thus in *Ginty v Belmont Building Supplies, Ltd.*, [(1959) 1 All E.R. 414], discussed in an article in *The Contract Journal*, March 19, 1959, there was an absolute obligation on the employer and the employee to use roof boards; G, despite these boards being made available for his use, did not use them and was injured; and even though his employers were in breach of the Regulations in that they did not ensure that G used these boards, that is they were in criminal breach of their absolute obligation to use boards, G was quite unable to recover anything from his employers. Again in *Jenner v Allen West and Co., Ltd.* [(1959) 2 All E.R. 115], discussed in an article in *The Contract Journal*, May 14, 1959, an operative J was killed and his widow sued the employers for breach of their duty under the Regulations to use roof boards. J, a foolhardy operative, failed to use these boards and J's failure meant, of course, that his employers also failed to use boards and they were thus clearly in criminal breach of the Regulations. It was thus a similar situation to *Ginty's* case, mentioned above. But on the facts here the court felt that J's employers, unlike the employers in *Ginty's* case, were not wholly free from blame; there was something more, that is, than a purely technical breach of the Regulations. So J's employers were held liable for J's accident but only to the extent of their fault. Moreover the court in J's case specifically took into account the fact, which should be pressed home to all operatives in the building industry, that by Regulation 4 those Regulations relevant to the work the operative is engaged on are binding on that operative. Thus J himself was also in criminal breach of the Regulations.

Now applying these two cases to the case under discussion surely Lord Parker should at least have borne in mind the obligation on W who was also bound to observe the Regulations. With respect Lord Parker's view that "the Regulations are to save workmen against themselves" is not wholly correct legally and the implication that workmen can disregard their obligations under the Regulations while leaving the employer under the strictest obligation is quite contrary to what the writer has always understood to be the theory behind the Regulations, viz., a code of safety binding on both employer and employee. Now, while no doubt W in this case did suffer from his employer's breach of the Safety Regulations (and it was thus a stronger case than *Ginty's*) it is surely more arguable than Lord Parker seems to have considered it, that W was, like J in the other case mentioned above, to some extent at fault if only because there was some obligation on him to observe Regulation 24 and work only with guard-rails.

MATERIALS BY HELICOPTER

All the materials for a water supply scheme at Ness in the Isle of Lewis are being transported to the site by helicopter. This £50,000 scheme involves the construction in inaccessible moorland of a steel pile dam and an intake pipeline.

The scheme was designed by Mr. George Peat, water and drainage engineer for the Ross and Cromarty County Council, and the civil engineering contractors are William Tawse, Ltd., Aberdeen.

EUROPE'S MOST UP-TO-DATE RAIL MARSHALLING YARD OPENED AT MARGAM

ONE of the major works in the British Railways (Western Region) modernisation plan reached completion recently when, at Margam in South Wales, the most wholly automatic marshalling yard in Europe was officially opened by Mr. K. W. C. Grand, member of the British Transport Commission.

The yard is situated between Bridgend and Port Talbot approximately 3½ miles from the latter station, on the down side of the main South Wales lines. It occupies an area of 178 acres extending over a distance of 1¾ miles and comprises 33 miles of plain line and 240 fittings. There are 12 reception sidings with engine release line and hump engine return line, together with 50 double-ended sorting sidings, 10 single-ended holding sidings, and seven single-ended tranship and cripple sidings with tranship platform and cattle pens. The capacity of the reception sidings varies from 63 to 95 wagons plus engine and van. The shortest sorting siding holds 43 wagons and the longest 101.

All 12 reception sidings are available for down trains, and are accessible over a new junction in the main lines at Water Street underbridge.

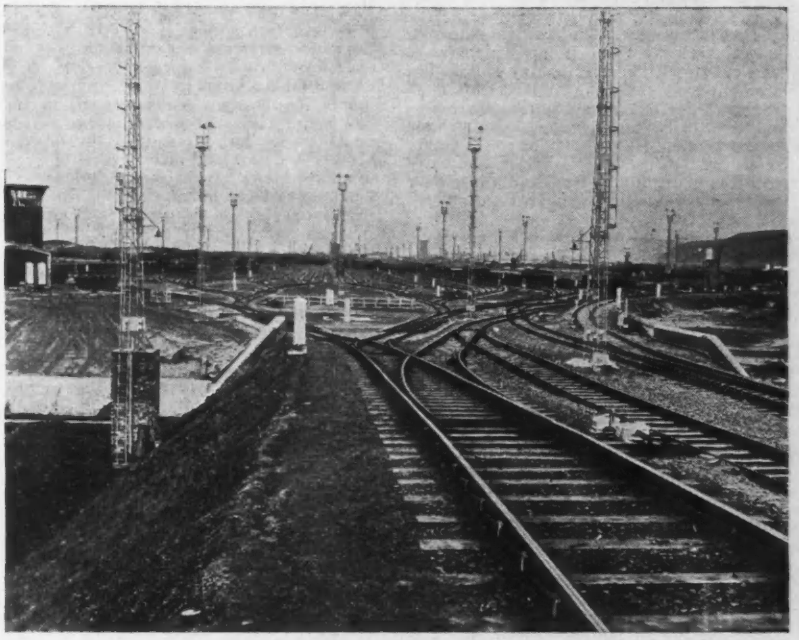
Five of the 12 reception sidings are also available for up trains, and are accessible via a new up arrival line, either from the up goods lines at Margam Moors signal box, or from The Steel Company of Wales sidings by means of two new flyover bridges at the west end of the yard.

After sorting, down traffic is cleared from the west end of the yard, but facilities are available for up trains to depart from the two most northerly fans of sidings via a new up departure line leading to the new junction with the main lines at Water Street.

Civil Engineering

The main features of the construction are: (1) Reception sidings; (2) the hump, control tower, and amenities blocks; (3) sorting sidings; (4) down through line, up arrival line and up departure line; (5) Steel Company's access lines; (6) doubling of Ogmore Valley extension line from Margam Abbey Works East to Newlands signal boxes.

The subsoil in the area consists of sand and peat to a considerable depth and the earthwork requirements were mostly for fill. By levelling off the existing irregularities and excavating from a nearby borrow pit these were carried out most economically. In all approximately 750,000 cu. yd. of sand were moved using seven diesel tractors and scrapers. During the peak period of construction as much as 2,000 tons of ballast per day were delivered to the site by specially programmed shuttle services of ballast trains.



Sorting sidings viewed from hump

The River Kenfig flowed across the site and a diversion was carried out in two straight cuts, one either side of the yard, linked up under the hump area by two reinforced concrete box culverts, under the tracks. Originally the river water was im-

Sorting sidings at night, showing floodlighting

pounded on the upstream side of the yard by a weir. Owing to the diversion this weir had to be replaced by one on the downstream side of the yard.

To gain the required length for the yard the turnout fittings were positioned on the Paddington side of the existing two-track Water Street Bridge necessitating reconstruction to a four-track bridge. Since the local authority had plans for a future trunk road by-passing Pyle the new bridge was built on a new alignment and the road widened, the local authority contributing to the cost. One abutment has been constructed in the form of a centre pier to allow for future widening.

The 12 reception sidings converge to a single track over the hump which has a vertical curvature of 11 chains radius. The gradient from the hump falls sharply (1 in 18) towards the sorting sidings, flattening out to 1 in 80 through the two 72ft.-long primary and eight 36ft.-long secondary retarders. All track joints in the yard with the exception of insulated joints have been site-welded by the "Thermit" or German "Quick" process.

Fifteen of the 50 sorting sidings have been allocated for The Steel Company of Wales traffic and lines direct to and from their works have been provided in association with the firm. A separate line for outgoing empty wagons from the steelworks to the up arrival line has been provided and two bridges constructed to take this line over the lines from the yard.

Control Tower

The control tower on the down side of the yard is erected on three separate reinforced concrete raft foundations with perimeter beams, each raft separated by an expansion joint to allow for differential settlement. The building itself is also constructed in three parts, viz.:

1. Control tower with main entrance lobby and staircase to first floor giving access to relay and battery rooms; second floor—air conditioning plant; third floor—control room.
   A lift giving access to all floors is incorporated in this building.
2. Compressor room wing. A single storey housing compressors and standby generator.
3. Relay room wing with traffic office, workshops, boiler room and other accommodation on ground floor and relay room and battery room on first floor.

The superstructure consists of three separate reinforced concrete frames with brickwork cladding except for the rear of the tower where the staircase, which is cantilevered from the reinforced concrete lift shaft, is enclosed by a glass curtain wall secured to a steel framework.

The main amenity block is placed near the hump and contains offices for the Yard-master and his staff and stores accommodation at ground floor level, and on the first floor a fully equipped kitchen and a mess room. The building has a reinforced concrete framework with brickwork cladding to match the control tower.

Provision has been made for a future depot for servicing diesel locomotives and the formation work has already been carried out. To meet operating requirements the Ogmore Valley extension line has been doubled by widening the existing embankment and extending several culverts. A new 110ft. span bridge on piled foundations with welded girders and prefabricated deck units carrying the new tracks over the main line has been constructed.

Road access to the site has been provided at the east end of the yard from the Port Talbot—Porthcawl Road (Water Street) and a new tarmac road links the amenity blocks with the control tower, passing under the hump summit.

Marram grass will be planted on a bare dune outside the yard boundaries to prevent wind-blown sand from invading the area of the yard.

Lighting Installation

The total electrical loading represented by the lighting installation of the yard and its grounds is approximately 300-kW and included in this figure are 216 100-W "Duoflux" lighting fittings which are used to floodlight the working areas of the yard proper. These floodlighting fittings are mounted at 55ft. above ground level on 99 tubular steel towers and are of two types, as follows: 63 towers having triangular bases 2ft. 6in. per side, for those positions where sufficient clearance is available; 36 towers having 1ft. 6in. square bases where space between tracks is severely restricted.

The square towers were specially designed, as were the top platforms for all the towers. These platforms are provided with vertical tubes on which are mounted the lighting fittings, and by the removal of a taper pin, can be rotated, thereby enabling the lighting fittings to be swung round over the platform and so facilitate cleaning and lamp replacement.

All the steel floodlighting towers are finished galvanised with two coats of aluminium paint, special regard to the finish having been paid in view of the prevailing site conditions of strong sand laden winds, and the possibility of rapid erosion of paint work. Each tower is mounted on a 6ft. cube concrete base designed to suit the load bearing characteristics of the Margam sand.

The main yard lighting is controlled from two consoles of the type used for aerodrome runway lighting, and each has a diagrammatic representation of the layout of the lighting points it controls, together with miniature lights to indicate the correct working of the circuits controlled, including those which would be fed by the standby set in the case of the failure of the mains supply.

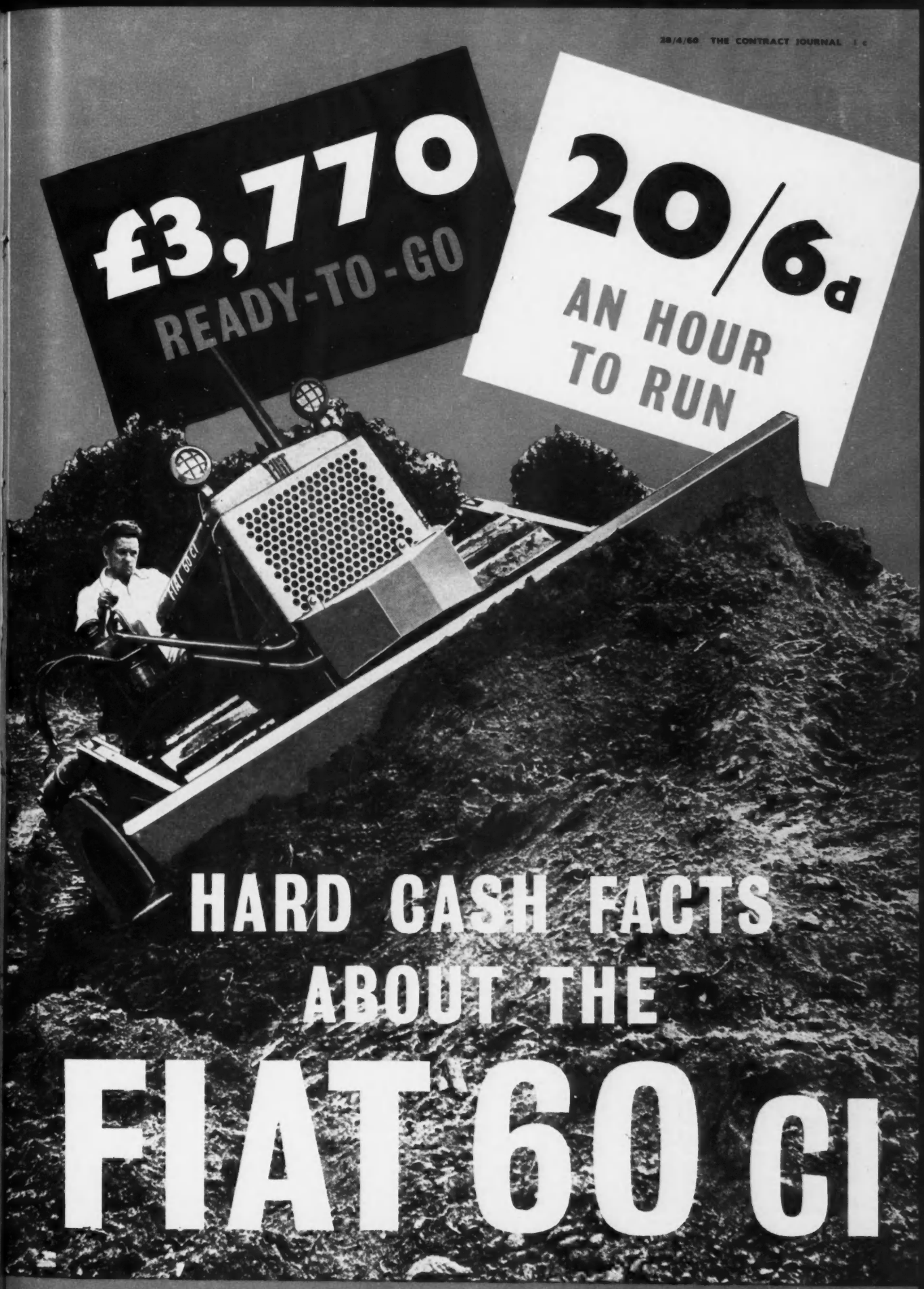
Each console is connected to a contactor panel by means of a multi-core p.v.c. insulated wire armoured and p.v.c. sheathed cable. One console is situated on the control tower operating floor, and has been designed to match the signal control panel, and the other is in the sorting sidings signal box at the west end of the yard.

Contractors

The main contractors for the scheme were: Sir Robert McAlpine (South Wales), Ltd. (earthworks, permanent way, bridgeworks, drainage, fencing, amenity blocks and signal box); John Morgan, Ltd. (control tower); Robert M. Douglas, Ltd. (earthworks and permanent way); British Insulated Callenders Cables, Ltd. (main electrical contractors); Lee Beesley and Co., Ltd. (internal electrical installation in control tower and yard buildings); Metropolitan-Vickers G.R.S., Ltd., (signalling equipment and retarders); Pye Telecommunications, Ltd. (radio equipment); Reliance Telephone Co., Ltd. (automatic telephone exchange) and British Insulated Callenders Construction Co., Ltd. (signalling cables).

The whole scheme has been developed and directed by Mr. M. G. R. Smith, M.I.C.E., chief civil engineer, and Mr. A. A. A. Cardani, A.M.I.E.E., M.I.R.S.E., signal engineer, Western Region.

Preparing new formation levels for the marshalling yard



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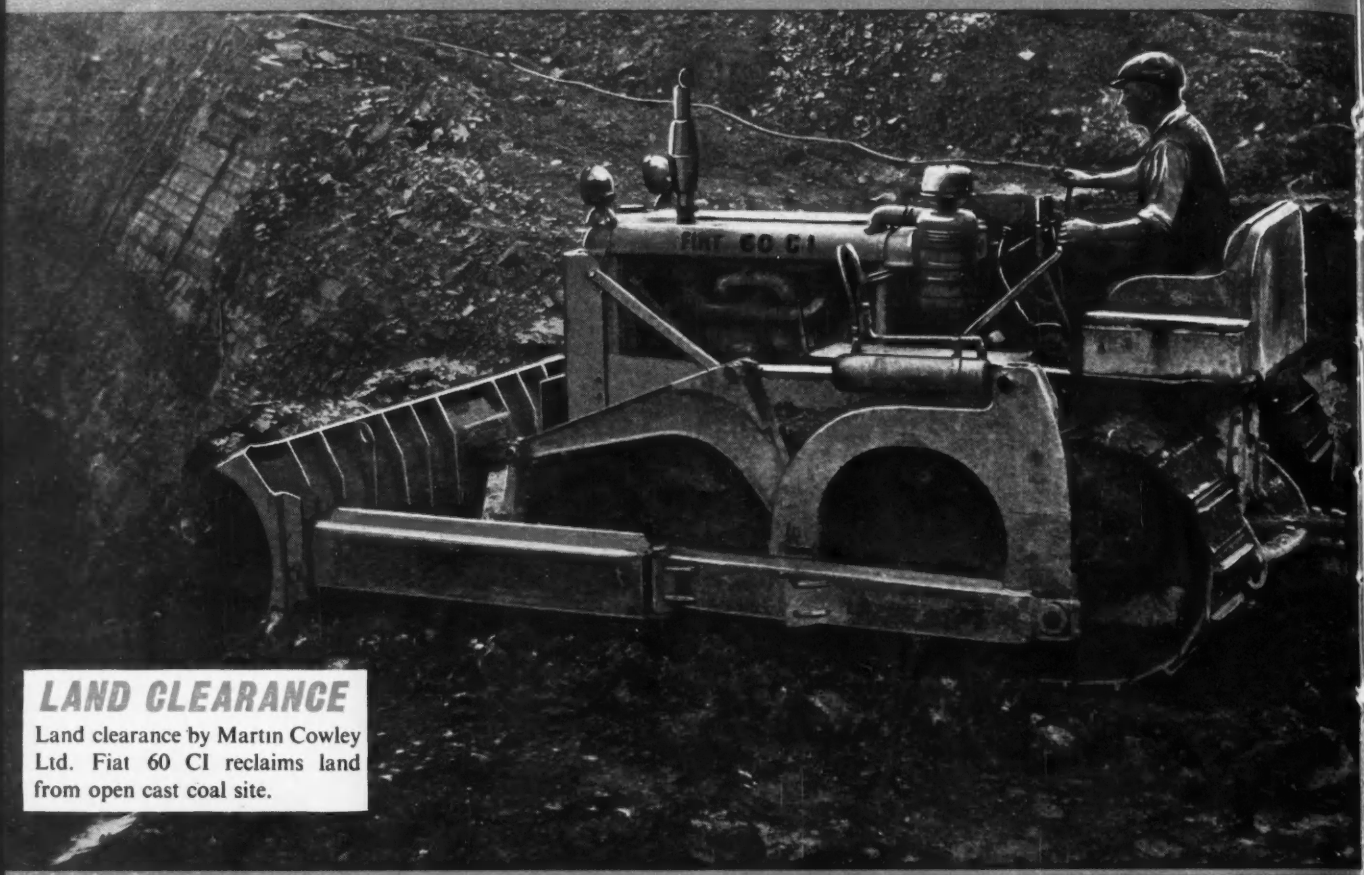

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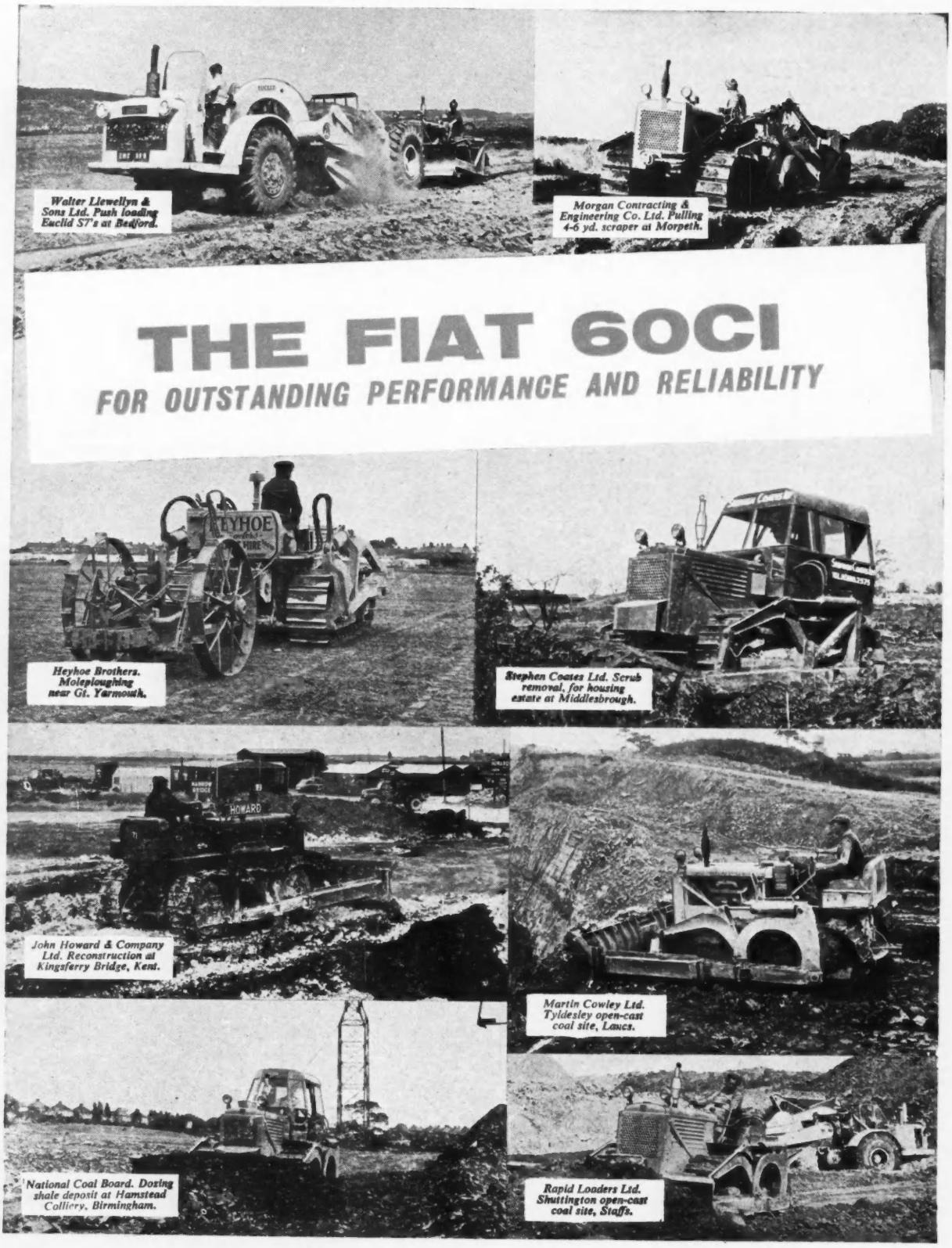

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THE CHANNEL TUNNEL

Study Group's Report on Construction Methods

THE Channel Tunnel Study Group has reached the conclusion that a Channel tunnel is now a practicable proposition both technically and financially. In its report recently published details are given of the technical studies undertaken by the Group which, whether the project proceeds or not, are of considerable interest to engineers and contractors. The following are extracts from the report dealing with these technical studies.

The traffic survey undertaken by the Group took account of two possible means of communication, rail and road. Similarly the technical study deals with the feasibility of a railway and a road connection and also with the possibility of combining the two. In each case the study deals mainly with a project for a tunnel or tube.

The Study Group had at its disposal the results of previous surveys, and it appointed two principal advisers, each assisted by eminent specialists: Professor J. M. Bruckshaw, Ph.D., M.Sc., D.I.C.F.Ins.P., professor of applied geophysics in the Department of Geology of the Imperial College of Science and Technology, London, and M. Jean Goguel, ingénieur générale des mines, Directeur de la Carte Géologique de France, professor of geology at the Ecole des Mines. In addition the President of the United States made available Dr. William O. Smith of the U.S. Geological Survey.

Their work, which took two years to complete, included an examination of the pilot tunnel excavated in 1882 at Sangatte (Pas de Calais), borings on land, geophysical prospecting by the most modern methods, borings and soundings of the sea bed, and microscopic examination of fossils.

The Sangatte tunnel, which had been bored in 1882 by the Association du Chemin de Fer Sous-Marin entre la France et l'Angleterre was pumped out. The engineers and geologists found that the chalk, in which the Beaumont machine had bored a circular tunnel 7ft. in diameter, was in excellent condition. There was very little seepage.

A borehole 814ft. deep was made at Escalles in France, while in England, as the sub-soil appeared to be more complex in structure, three boreholes were made. One of these, behind Shakespeare cliff, was 546ft. deep and two others, 364ft. and 420ft. deep respectively were in the area of Dover. These boreholes not only yielded data on geological structures, but formed a basis of comparison for further systematic sampling and enabled many laboratory tests to be made.

Main Object

The main object of the geophysical survey was to investigate the geological structure under the sea, which previously had been impossible to prospect. An experiment in seismic prospecting was first carried out on land on either side of the Straits. From the results obtained it was possible to measure the velocity of sound in different strata. These measurements were necessary for the use of methods based on the reflection of sound waves.

Among such methods was the "Sonar" technique recently developed for prospecting for petroleum under the sea. It gives a continuous recording of sound-waves emitted under the surface of the water and reflected from the sea-bed, penetrating into it for a certain depth. A small boat equipped with this relatively simple device was used for two months in the summer of 1958 to cover the areas which were to be examined. In spite of the chalk bottoms which were encountered, the results exceeded all hopes. However, though a fair picture was obtained of the structures which were sounded, penetration below the sea-bed did not exceed 100ft.

To complete the work, a fresh survey was undertaken in the spring of 1959 using the "Sparker" process which had recently proved its value in the Persian Gulf. Like "Sonar" it is a system of continuous recorded sound-wave reflections, but the waves are more powerful, have a lower frequency and thus penetrate more deeply into the sea bed.

From the results of these operations a complete hydrographic map of the Straits of Dover was drawn up. It showed a few gulleys, one of them 279ft. deep. A geological map of the undersea strata and their outcrops was also made and for the first time it was possible to obtain an accurate picture of the cretaceous sub-soil across the Straits of Dover. However, geophysical exploration can only locate strata without identifying their geological composition, so the work had to be confirmed by direct identification of outcrops, under-sea borings and sampling and the examination of fossils.

The survey of the surface of the sea-bed, together with an exploration by frog-men, produced 393 samples extracted from 12 to 20 inches below the sea-bed. These were examined in the laboratory and used to identify the geological outcrops revealed by the geophysical survey. Microscopic study of the fossils obtained in the samples from the sea-bed and from the borings was also carried out. The age of a formation inside an apparently homogeneous stratum can be determined from the presence of certain specific foraminifera.

Eight borings were made in the sea-bed at suitable points across the Straits. These were used to identify the nature of the strata located by the geophysical surveys and for deciding on the thickness and dips of the strata. Samples were taken from each borehole at various depths corresponding to different types of ground and these were analysed at the laboratory. This work was done from a specially equipped ship; the deepest boring was 226ft. below the sea-bed in a depth of water of 131ft.

The results of the research carried out in 1958 and 1959 confirm the conclusions drawn from the 1875 and 1876 operations regarding the continuity of the Cenomanian or Lower Chalk formation and show that its thickness varies from 262ft. on the English coast to 213ft. on the French coast. Three pockets of gravel and some unfilled gulleys were identified as well as slight faults orientated parallel to the line of a possible tunnel. But no faults crossing this alignment at right angles were detected.

It appears from the survey that water seepage should be within the normal limits of engineering work, and injection treatment should be sufficient to deal with it.

The physical and mechanical characteristics of the Lower Chalk are particularly favourable for the use of machines boring a tunnel to the full diameter.

It is thus definitely established that there is no major difficulty in driving a tunnel through the Lower Chalk provided that it is bored in the lower part of this stratum at a suitable distance above the Gault. This requirement would seem to exclude the possibility of a tunnel with a very large diameter such as would be required to contain both a road and railway line.

The Jurassic formation south-west of the line Folkestone to Blanc-Nez is far less suitable. The tunnel route here would meet with many changes of ground and would probably be cut by many transverse faults. Frequent slips and caving-in of ground are a serious risk in such a formation. Such difficulties are not insurmountable, but they do not lend themselves to the use of modern machines working to the full diameter. Other slower and more costly tunnelling methods would have to be used or else an immersed tube would have to be laid down from the surface in a trench dredged in the sea-bed.

As a result of these investigations it is fair to conclude that the "geological risk" of working in the Lower Chalk is slight. However, more detailed prospecting would have to be carried out in the line of the route chosen in the course of the preparatory work on the project.

Engineering Methods

From the above studies it is apparent that a bored tunnel is a practicable proposition only in the Lower Chalk, which entails a route from Sangatte to the area between Folkestone and Dover. The Jurassic route more to the west is slightly shorter and although a bored tunnel here is too difficult to contemplate, it might be suitable for an immersed tube.

The best means of carrying out both these types of work have been studied.

(a) Bored Tunnel

Contractors likely to be awarded the work should be allowed to put forward methods which they consider would be best.

Tunnel boring machines have been inspected in operation in the coal mines at Bruay, the potassium mines in Hanover and also in the tunnels for the Oahe Dam in the United States; and their performances have been discussed with their makers and operators.

The makers of the last two machines have tested samples of Lower Chalk taken from the boreholes and consider that it is eminently suitable for their machines. The measured performances of these machines suggest that the average rate of progress for the railway tunnel with an outside diameter of 23ft. 10in. would be 1,475ft. per month. For the road tunnel, which is of much larger diameter, it would be necessary to draw on the experience gained in the railway tunnel.

In order to ensure that the tunnels follow favourable ground and for the safety of the works, a service tunnel would be bored at a suitable distance ahead of the main tunnel, enabling the ground ahead to be tested by borings.

If required, water-bearing fissures or weaker zones can be treated by injections of cement using a technique which is now common practice.

It is proposed to remove the excavated material by hydraulic methods, which consist of crushing it, mixing with water and then pumping it out through the land shafts. This method has already been advocated in previous studies and has been used with success in recent works elsewhere. It is also possible to pump the spoil directly into the sea through vertical boreholes in the tunnel roof; this naturally calls for favourable conditions and proper safeguards.

Although the Lower Chalk would not require support as a general rule, a permanent concrete lining would be essential to prevent deterioration and to protect the electrical equipment against leakages. The lining would be carried out by specially designed units moving on rails, which would fix the shuttering, mix the concrete and put it in position by means of special pumps.

(b) Immersed Tube

The method of constructing tunnels across estuaries and rivers by lowering prefabricated units into dredged channels has often been carried out but usually over short distances. It has the advantage of eliminating the geological risk. This is an appreciable advantage for the Channel Tunnel. The method would also make it

possible to construct a tunnel with a wide diameter, taking both rail and road traffic.

In the Straits of Dover, the application of this method would meet the particular difficulty of dredging a deep trench in the sea-bed at a very considerable depth (up to 260ft.), from floating equipment which would be exposed to the constant rough seas and bad weather of the Straits.

In these conditions such a solution seems hazardous. But use could be made of the recent development of fixed platforms supported on stilts, first used for drilling for oil at sea and later adapted for installing permanent radar stations and other marine works. However, the task of towing out the units and some of the operations carried out from a platform would be affected by the state of the sea.

A considerable amount of information has been gathered about this method, and a large enterprise of this kind was visited in the United States. Specialist contractors were prepared to offer guaranteed performance. It has consequently been possible to make a preliminary study for an immersed tube, either single or with both tracks combined in the same tube and to estimate the cost of construction.

(c) Bridge and Composite Construction

The construction of a bridge following a direct line, or of a combination of a bridge to the Colbart and Varne banks and a tunnel beyond, would meet with some of the same difficulties as an immersed tunnel. The same technique can therefore be envisaged for building the piers. This is indeed the only means by which a bridge across the Straits could be built.

Design for a Bored Tunnel

The civil engineering study for a bored tunnel for both rail and road was entrusted to two groups of consulting engineers: In London—Sir William Halcrow and Partners; Livesey and Henderson; and Rendel, Palmer and Tritton; and in Paris—Société Générale D'Exploitations Industrielles (Sogei).

The bored tunnel might consist of a railway tunnel and/or a road tunnel, separate but adjacent, keeping within the lower part of the Lower Chalk. It would cross the Straits between Dover and Sangatte.

(a) Railway Tunnel

For this type of construction, ventilation does not give rise to any serious problems, and its effect on the cost would be negligible.

The terminal railway stations would be sited between Ashford and Folkestone in England and near Calais in France. They would be about 44 miles apart by the tunnel. The tunnel proper would be 32 miles long between portals. The part under the sea, slightly inclined to follow the Lower Chalk, would be 23 miles long. The English land tunnel (seven miles) and the open approach to the terminal (nine miles) would be longer than on the French side (three and 1¼ miles respectively) because of the need to emerge behind the cliffs and to reach an area suitable for terminal installations. The conditions behind Sangatte and Calais, for the French entrance, are more favourable.

The construction would consist of two parallel one-way tunnels of 21ft. 4in. internal diameter, with cross passages and four crossover junctions. A service tunnel of 10ft. 10in. internal diameter would be driven a certain distance ahead of the main tunnels, between and slightly below them. It would be valuable for construction work, maintenance and drainage.

The longitudinal section of this system of tunnels would be in the form of a W with the high point on the French side of the centre of the Channel, at about 125ft. below the bed of the sea which is here 148ft. deep. Two drainage galleries will drain off water from the low points of the W towards each coast.

The concrete lining of the main tunnels will be 15in. thick and that of the service and drainage galleries will be 6in. to 9in.

The permanent way would be on ballast above a drainage channel. The gradients in general would not exceed 10 per 1,000 (exceptionally 11.6 per 1,000). The curves would have a radius of not less than 3,937ft. (exceptionally 3,445ft.).

Traction would be entirely electric with current at 25,000-V. The catenaries, hung from the roof of the tunnel, would be parallel, leaving a clearance of 14ft. 11in. above the track.

The lines for the cross-channel shuttle service would have a loop at each end so that trains do not have to reverse to return from one station to the other.

The terminal installations have been carefully designed to speed up the operations of loading and unloading vehicles. The rail tracks would be flanked by platforms 46ft. 9in. wide. Some would be at a high level for loading double-decker wagons. The buildings, parking spaces and traffic control have all been studied. In addition the stations would have easy connections with the rail and road systems, both in France and Great Britain.

ESTIMATED COST OF THE RAILWAY TUNNEL

The estimated cost of a railway tunnel is as follows:

Engineering work	£80.0m.
Railway installations between terminals	£9.8m.
Terminal stations*	£14.0m.
Rolling stock	£6.0m.
	£109.8m.

In addition it is estimated that improvements to the French Road system serving the terminal would cost £2.2m., which would bring the total cost up to £112m.

Maintenance and renewal expenses would be as follows:

	1965	1980
Railway installations	£1.050.000	£1.050.000
Tunnel proper ...	£253,000	£480,000
	£1,303,000	£1,530,000

Construction work is expected to take five years.

(b) Road Tunnel

The terminals for the road tunnel have been planned at about one mile behind Sangatte and 2½ miles inland from Dover at points where the simplest connections can be made to the highway system. The total distance between terminal stations would be 26 miles, of which 23 miles would be below the sea.

The complete construction would consist of two circular tunnels of 36ft. internal diameter, each with a roadway 29ft. 6in. wide. As it appears reasonable to consider constructing them in two successive stages, preliminary plans have concentrated on a single two-way road tunnel. The 29ft. 6in. roadway would run between kerbs with a raised footway on one side and would allow for one traffic lane 11ft. wide in each direction, with a central lane 8ft. wide for stationary vehicles.

A second variation has been studied, with a roadway 32ft. wide with two 11ft. traffic lanes and a 10ft. wide parking space in the centre. The internal diameter of this tunnel would be 39ft. 4in.

Assuming that a railway tunnel has already been constructed alongside, cross passages would make it possible to use the railway service tunnel for constructional and maintenance purposes. The road tunnel would also be in the form of a W with gradients of not more than 4 per cent. and curves of not less than 3,280ft. radius. The concrete lining would be 33½in. thick for the road tunnel, as compared with 30in. for the rail tunnel.

The ventilation of so long a road tunnel presents serious problems, which have been studied for both plans. In order to meet accepted standards and to avoid concentrations of carbon monoxide greater than two parts per 10,000 at peak traffic of 750 vehicles per hour, the following installations are envisaged. A "transversal" system would be used, fresh air being introduced and foul air drawn out laterally all along the tunnel. Fresh air would be drawn in from each end of the tunnel and also from intermediate shafts on one or two artificial islands according to the alternative chosen.

FIRST ALTERNATIVE

As this tunnel would have an internal diameter of 36ft., one artificial island would be required. Fresh air would be drawn in through the railway tunnels and through cross passages joining them to the road tunnel. The air would enter at road level on one side only.

The foul air would be sucked out through openings on the opposite side of the roadway and discharged through ducts in the spaces above and below the roadway. This system would require an installation of 146 fans and a total power of 24,000-h.p.

SECOND ALTERNATIVE

This tunnel would have an internal diameter of 39ft. 4in., and would be supplied by two intermediate air shafts on two artificial islands. In this case the fresh air would be pumped in through the lower space in the tunnel and introduced at road level on either side of the tunnel.

The foul air would be sucked out at the ceiling and expelled through the upper space between the ceiling and tunnel crown. Near the shafts, however, some of the foul air would need to be expelled through the tunnel itself. This installation would require 18 fans and a total of 7,000-h.p. This second alternative would allow twice as much peak traffic (1,500 vehicles per hour), though in that case 36 fans and 56,000-h.p. would be required.

ESTIMATED COST OF THE ROAD TUNNEL

The cost of the road tunnel has been estimated as follows:

	First Alternative 36ft. dia. One Island	Second Alternative 39ft. 4in. dia. Two Islands
Tunnel proper	£104m.	£121m.
Ventilation plant and islands	£17m.	£24m.
Surface installations† ...	£4m.	£4m.
	£125m.	£149m.
In addition, the French road system would have to be altered to connect with the tunnel at a cost of £3.6m., making the sum total	£129m.	£152m.

The cost of maintenance has been estimated at £253,000 for the year 1965. The construction is expected to take five years.

An Immersed Tube

The study for the above was entrusted to Parsons, Brinckerhoff, Quade and Douglas of New York, who also studied plans for a bridge or a composite bridge and tube.

Among the various routes considered the one preferred was from the French coast near Wissant, crossing the Channel in a straight line and then, after reaching the English coast, curving to emerge at Sugar Loaf Hill between Dover and Folkestone. The total length of this tube between portals would be 29 miles of which 22 miles would be under the sea.

Three types of construction were considered:

(a) An immersed railway tube with two tracks, 45ft. 10in. external diameter.

(b) An immersed road tube of the same size with an internal diameter of 36ft., containing one traffic lane in each direction with a parking lane between them. As in the case of the bored tunnel, there is a second alternative with a larger diameter of 39ft. 4in.

(c) A combined immersed tube with two railway tracks and a four-way road system on two levels inside a circular tube of 66ft. 10in. outside diameter.

** This figure represents the estimated cost of the initial installations necessary when the tunnel first comes into operation. It would have to be increased to £17m. by 1980.*

† This figure represents the estimated cost of installations for transferring rail passengers into motor coaches for the tunnel crossing.

(Concluded on page 420)

25-MILE LONDON RING MOTORWAY PROPOSED BY BRITISH ROAD FEDERATION

A RING motorway, 25 miles long, encircling central London, is put forward by the British Road Federation as the cornerstone of their new proposals for tackling the city's traffic problems. From this ring radial motorways would extend to join existing and future motorways and major all-purpose routes radiating from the capital.

Such a ring, say the Federation, is needed to serve as the rim to which future cross link motorways could be joined. In addition, linked with the M.1, it would provide direct access from the industrial areas of the midlands to the dock area.

The Federation's proposals are contained in a memorandum which has been sent to the Minister of Transport. They have been prepared "in order to inject some reality in to the road programmes advanced in last year's London Roads Committee report." The Federation propose that the larger of the two 20-year programmes put forward by the Committee should be amended to include the ring motorway, built for the greater part of its length over or alongside railways. It also proposes that the motorway radials should be included and the whole undertaken as a 15-year programme.

The motorway would run from a new bridge over the Thames at Fulham, via Walham Green, Kensington, Westbourne Park, Kilburn, South Hampstead, Camden Town, Islington, Hackney, Poplar, Stepney, a new Thames tunnel at Rotherhithe, Bermondsey, Camberwell, Denmark Hill, Brixton and Battersea.

By being alongside or above existing railways for the greater part of its length, it minimises rehousing commitments and severance of communities. The space above or beside the railways could be rented, reducing the initial capital outlay for the road and giving added income to British Railways.

Modern civil engineering techniques, say the Federation, make the proposition feasible. A structure similar to the one proposed is already planned in the Birmingham area between Oldbury and Smethwick.

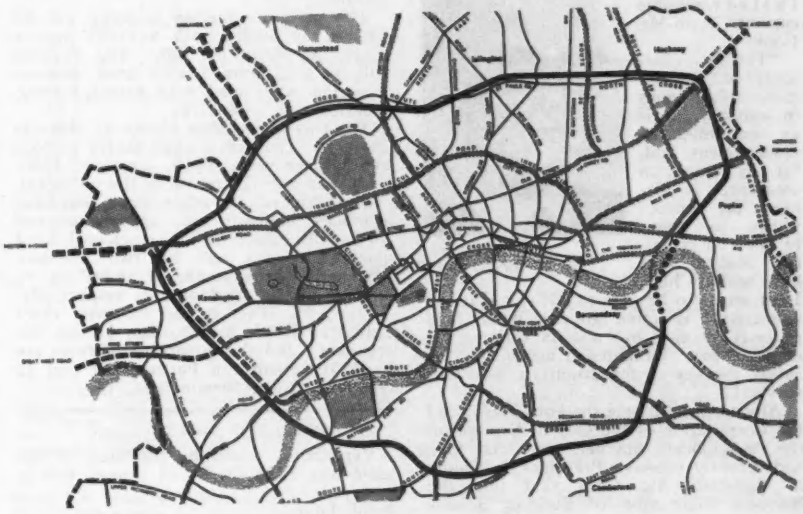
A ring motorway of this type was an essential feature of the report of the Association of Metropolitan Borough Engineers and Surveyors (A.M.B.E.S.) submitted to the London Roads Committee. The new proposal follows, for much of its length on the north side, the line proposed in the A.M.B.E.S. report, and for half of its length it lies almost on two cross-routes proposed in the London Roads Committee report, namely the west and north cross-routes.

Based on estimates made by A.M.B.E.S for their proposed urban motorway such a road over railways, with dual three-lane carriageways, would cost not less than £2½m. a mile, including necessary intersections. A tunnel under the Thames, also with dual three-lane carriageways similar to that proposed by the Association, and considered essential by them, would cost £21m. The total cost for the 25-mile motorway would therefore be some £83½m.

Radial motorways on the lines of those contained in the A.M.B.E.S. proposals, excluding that to the future Brighton radial motorway, would, in the L.C.C. area, cost about a further £9m.

In addition to these schemes, the Federation agree with the need to carry out those in the £200m. programme proposed by the London Roads Committee. However, the suggested ring motorway together with the radial routes would duplicate or render unnecessary nearly 20 per cent. of the London Roads Committee programme and, it is estimated, would reduce the cost to some £165m.

The Federation state that while the planning and land and space acqusition work is under way, the various street improvements set out in the London Roads Committee programme could be proceeding, but the time factor is extremely important and its reduction to an absolute minimum is essential.



The route of the proposed ring motorway

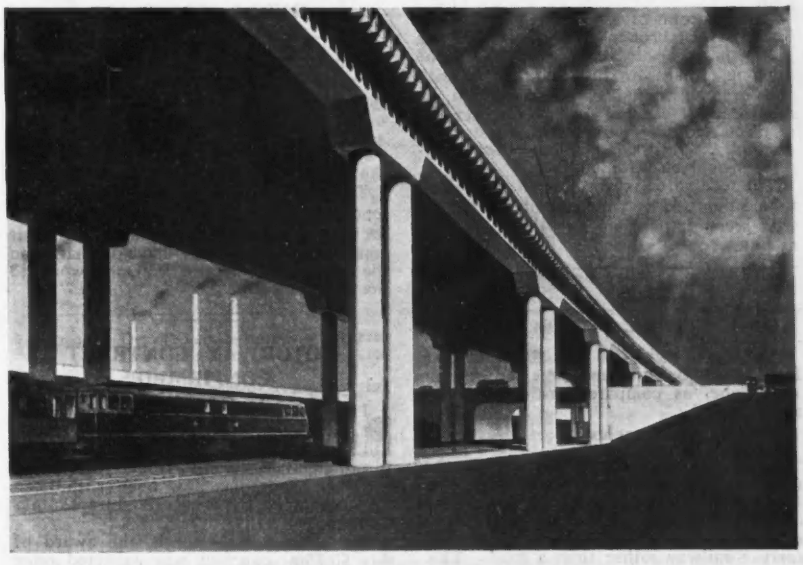
A.M.B.E.S. consider that construction of a ring and radial urban motorways in London could begin three years after agreement in principle. This period includes the promotion of necessary legislation and preparation of contracts. Seven years, they say would be required for completion. On the basis of the Association's proposals works to the value of just under £170m. could be carried out by 1970, leaving less than £100m. of the less important schemes to follow. It should be possible, according to the Federation, for these to be carried out in the next five years, making 1975 the completion date for the whole programme.

Car Parking

Another point made by the Federation is that the ability to approach central London and to travel round the inner area at relatively high speeds would make it possible to embark on a logical programme of off-street parking garage development.

It is estimated that the proposals outlined by the Federation in their memorandum call for expenditure at the rate of some £18-20m. a year. This is a more intensive construction programme than either of those put forward by the London Roads Committee. The annual £6m. envisaged by the Committee, however, was related to a Government expenditure of £60m. per annum for the country as a whole. An annual £18m. London road programme therefore would bear the same relationship to an annual £180m. national programme.

The Federation agree with expert opinion that national road spending on this level is essential if within measurable time the country is to be equipped with a highway system capable of meeting the country's needs.



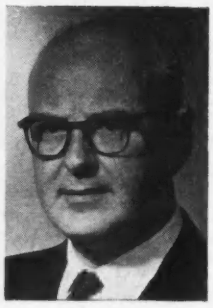
An example of over-rail construction. Artist's impression of viaduct at Oldbury and Smethwick

TRAINING FOR MANAGEMENT

L.M.B.A. President's Comments

THE importance of training for management was emphasised by the president of the London Master Builders Association, Mr. E. J. Cook, when he spoke last week at a luncheon given by the Association in honour of the Lord Mayor, Alderman Sir Edmund Stockdale.

"If this great country of ours is to be able to meet successfully the fierce and mounting competition from younger nations throughout the world, it is our duty to see that the native ability of our people is developed to its fullest possible capacity," said Mr. Cook.



E. J. Cook

"This is a challenge to management at all levels in industry. It is an indictment of management if, for any reason, an employee is denied the opportunity to attain to the full potential ability that lies within him. I am proud to be able to tell you that our Association is active not only in the field of craft training but also in training for management. Enlightened management is surely the key to this country's industrial survival."

After congratulating the Lord Mayor and the Corporation of the City of London on the "magnificent manner" in which they had recently received President de Gaulle in Guildhall, Mr. Cook said that the National Federation of Building Trades Employers had been honoured with an invitation to send a representative to the 150th anniversary celebration of the Chambre Syndicale des Entrepreneurs de Maconnerie Ciments et Beton Arme in Paris.

He stated that he looked forward to representing the National Federation at these celebrations, and particularly to being able to convey to the builders in Paris the good wishes of the master builders of London.

Replying, the Lord Mayor said that various opinions had been expressed about the design of new buildings in the city, but their main task was to rebuild as quickly as possible.

He also referred to the "tremendous need" for craftsmen and spoke of the value of all round training, and the advantage of architects, contractors, etc., working together as a team.

Among the guests at the luncheon were Sir Harry Hylton-Foster, The Speaker; Lord John Hope, Minister of Works; the Mayor of Westminster; the chairman of the London County Council; officers of Government Departments and the City including one of the Sheriffs; presidents and representatives of the professional, industrial and commercial institutions and organisations connected with the building industry; Masters and Clerks of most of the City Livery Companies connected with the building crafts; and representatives of the educational field, including the technical colleges.

DOWNING STREET CONTRACT FOR JOHN MOWLEM

The Ministry of Works have announced that the contract for the reconstruction of 10, 11 and 12 Downing Street and the Treasury Whitehall buildings has been placed with John Mowlem and Co., Ltd., London, S.W.1.

Estimated to cost £1¼m., the combined scheme has been designed by Mr. Raymond Erith, F.R.I.B.A. (*The Contract Journal*, December 17, 1959).

£1¾M. B.M.C. MERSEYSIDE FACTORY CONTRACT

A CONTRACT, valued at about £1¾m., has been placed with Holland & Hannen and Cubitts (North West), Ltd., New Chester Road, Bromborough, Ches., for a factory on Merseyside to be used by British Motor Corporation.

Due for completion within 15 months, the 350,000 sq. ft. plant, which will cost a total of £3¼m., will be occupied by Fisher and Ludlow, Ltd., for the manufacture of domestic appliances. It will be on a 50-acre site at Kirkby, about 30 acres of which are being developed initially. The two-storey office block will be completed within three months of the main factory.

The main production building will be 1,020ft. by 300ft., with a works annexe measuring 900ft. by 30ft. The building will be steel framed with lined asbestos roof and walls clad with patent glazing, asbestos and brickwork.

The two-storey office block will measure 293ft. by 41ft. with a single-storey canteen and kitchen wing, 193ft. long and 136ft. wide, and a boiler house in the basement.

Steel framed, the office block will have a precast concrete unit upper floor and roof, with cladding of brickwork and glazing. There will be two ancillary blocks, east and south, of 26,587 sq. ft. and 11,275 sq. ft. floor area respectively.

Harry W. Weedon and Partners, 45-47 Calthorpe Road, Birmingham, 15, are the architects, and the quantity surveyors are L. C. Wakeman and Partners, 11 and 12 Highfield Road, Birmingham, 15.

(Concluded from page 418)

Ventilation would be provided in the same way as in the bored tunnel, that is to say:

Road Tube—

First alternative—inside diameter 36ft. and one artificial island.

Second alternative — inside diameter 39ft. 4in. Two artificial islands at points one third along.

Combined Tube—

Two artificial islands.

This immersed tube would consist of units of appropriate length, prefabricated ashore or in floating docks and towed out to the working site. The placing unit would consist of a working platform supported on strong legs above the highest waves. A trench of suitable depth would be dredged by special excavating plant worked from the platform. Each tube unit would be towed into position and lowered into the trench, and a watertight joint would be made with the previous unit.

The bottom of the trench would be levelled with broken stone stored on the platform. The trench would finally be filled in either with broken stone or with the dredged material, when it can be recovered. Once the tubes have been set in place and their alignment and stability assured, the railway track and other equipment would be installed.

The estimated costs for an immersed tube, submitted by the group of contractors who were responsible for this plan, are as follows:

Rail Tube	Road Tube		Combined Tube
	First Alternative	Second Alternative	
£112.9m.	£104.2m.	£114.9m.	£201.1m.

They have estimated that it would take four years to built an immersed rail or road tube, as compared with five years for a tunnel.

Conclusion

After an objective study of all the possible kinds of rail and road connection across the Channel, the Study Group has come to the conclusion that, at the first stage at least, the tunnel or tube should carry a railway rather than a road. This conclusion is based mainly on the economic and financial considerations.

Late Construction News

PECKHAM OFFICES EXTENSION.—Tenders are now being invited from selected contractors for the erection of three additional storeys over the existing three-storey office building of Samuel Jones and Co., Ltd., at Blakes Road, Peckham, London, S.E. Plans are by Slater and Uren, 5 Gower Street, London, W.C.1, and quantities by Selby and Sanders, Caxton House, Tothill Street, London, S.W.1.

CHESTER HOUSING.—Subject to Ministry approval, Chester City Council are to accept the £148,070 tender of Thomas Warrington and Sons, Ltd., 82 Station Road, Ellesmere Port, for the erection of 82 houses, 28 flats and 20 garages at Plas Newton estate.

SUNDERLAND COLLEGE BUILDING.—The tender of the Sunderland Direct Labour Department has been recommended for acceptance by the Governors of Sunderland Technical College for the first stage of the college extension in the South Johnson Street area. The Department's tender was £661,600, the lowest by £16,000.

HOUSING AT EDINBURGH.—Hart Bros., 29 Church Street, Tranent, East Lothian, have been awarded a £357,478 contract by Edinburgh City Council for erection of 230 houses and 30 lock-up garages at the Clemiston South housing estate, Edinburgh.

CITY OFFICE AND WORKSHOP.—Rush and Tompkins, Ltd., 109 Station Road, Sidcup, Kent, have been awarded a contract by Sheffield Smelting Co., Ltd., for an office and workshop building at 132-136 St. John Street, London, E.C.1.

258 LEEDS DWELLINGS.—Leeds City Council have been recommended to place contracts with N. B. Bell and Co., Ltd., Leeds, for 130 dwellings at Queenshill, Stonegate Road, and 128 dwellings on Swinnow estate, at £179,830 and £174,432, respectively.

BASINGSTOKE HOUSING.—Subject to approvals, Basingstoke Borough Council have been recommended to accept the £126,392 and £237,116 tenders of E. and J. Cotton, Ltd., High Street, Iver, Bucks., for 72 dwellings and 161 dwellings, respectively, at South Ham.

£166,125 LAMBETH DWELLINGS.—The £166,125 tender of Pauling Construction, Ltd., 26 Victoria Street, London, S.W.1, has been recommended to Lambeth Borough Council for acceptance, subject to Ministry approval, for 64 dwellings, a shop and 39 garages at stage 5 of Studley Road scheme.

MITCHELL CONSTRUCTION'S HYDRO CONTRACT

The Mitchell Construction Co., Peterborough, have been awarded a contract by the North of Scotland Hydro-Electric Board for the construction of a barrage, intake, small power station and certain ancillary works on the River Awe, near Taynuilt, Argyllshire, in connection with the Loch Awe hydro-electric scheme.

The company were earlier successful in tendering for other hydro-electric works for the Board at Strathfarrar. With this contract at Awe, they have in hand on the two hydro-electric schemes work to the value of £5m.

MOTORWAY CONTRACT CONFIRMED

The Ministry of Transport announced last week that the tender of A. Monk, Ltd., for a further 15 miles of the Bristol-Birmingham Motorway, from Warndon to the Ross Spur, has now been authorised for acceptance by Worcestershire County Council.

As reported last month, the award of this £3.75m. contract was expected once certain difficulties over the acquisition of land had been settled.

BUILDING RESEARCH STATION

DIGEST No. 133

Domestic Heating and Thermal Insulation

THREE Digests already published, Nos. 35, 93 and 94, deal with various aspects of the heating and insulation of houses. The present Digest brings together the bare essentials that are needed to guide the choice of the standard and methods of heating from amongst the many systems that are available. It has been prepared largely in response to requests from a number of inquirers who have asked for a short statement on domestic heating and insulation already covered in greater detail in the previous Digests.

Domestic Heating Systems

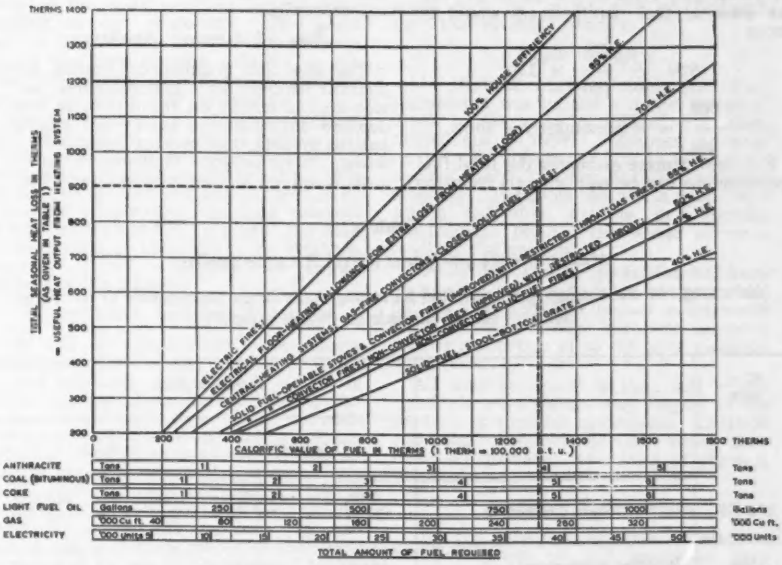
In choosing a domestic heating system the decisive questions are: What standard of heating is required? How much will it cost to install? How much will it cost to run? Convenience in operation and the form of heat distribution preferred are also important.

A very wide range of standards of heating is available, but broadly, the systems of domestic heating can be divided into three main categories:

(1) Full house warming;
(2) Partial heating, i.e., the full heating of two or three rooms from a central heat source, with the remainder of the house heated as required by gas or electric fires; or the background warming of the whole house to a uniform temperature lower that that obtained by category (1) together with topping up in individual rooms as required;
(3) Heating limited to individual appliances in one or two of the main living rooms.

The main differences in the three standards of heating are in the scope of the heating service. In the full house warming systems and background heating systems, for instance, comfort is enhanced by the fact that the house is uniformly warm; such systems are essential for the open plan house. By contrast, systems using separate appliances, e.g., open fires, in a limited number of rooms give a less uniform standard of comfort.

The standards covered by these three categories can be characterised broadly in terms of the difference between the average outdoor temperature over the whole heating season and the average indoor temperatures they provide. Assuming an average seasonal outdoor temperature of 43 degrees F, a temperature difference of 18 degrees F averaged over 24 hours can be taken as representative of full house warming, 13 degrees F for partial central heating systems and 11 degrees F or less for the third category. The smaller temperature difference between the medium and low standards of heating may be explained by the fact that even in dwellings where the bedrooms are unheated some stray heat is received from the heated part of the house. As explained in Digest 94 these *average* temperature differences can help in estimating seasonal fuel requirements and, therefore, running costs. They are not, however, appropriate for estimating maximum heat demands and hence the size of the heating plant; these have to be calculated from a *maximum* temperature difference between indoors and outdoors as explained later.



NOTE: The values for 'house efficiency' are approximate and assume an inside flue (for systems other than electric) with heating for 5 hours or more per day (see also Digest No. 94).

Capital Costs

Comparative capital costs of various domestic heating systems are given in Digest 93. For a fair comparison account should be taken of any building costs incidental to the heating installation, such as those of brick flues and fuel stores, or conversely the saving effected if these items are not required.

For instance, in a system comprising one open fire with backboiler, electric immersion heater for summer use and two electric fires, the cost of a chimney breast and flue and a fuel store for the open fire is about 25 per cent. of the total cost of the installations. Broadly, the capital costs of the three categories of heating are in the same order as the standard of heating attained, but there may be some overlapping.

Running Costs

The seasonal heat loss for a particular dwelling will depend to some extent on the overall floor area, on the grade of insulation, the standard of heating, the ventilation rate and the length of the heating season. To simplify the calculation of a rough estimate, Table 1 gives the total seasonal heat loss in therms from typical dwellings for the three categories of heating and for two grades of insulation. The medium grade of insulation corresponds to the minimum requirements under the revised Model By-Laws. An allowance has been set against the seasonal losses, for miscellaneous seasonal heat gains (e.g., solar

Table 1

Total seasonal heat loss (in therms) from dwellings

(Offset by miscellaneous heat gains of 170 therms; two air changes per hour and an average outside air temperature of 43° F are assumed)

Floor area		*Insulation grade*					
		Medium			*High*		
(Sq. ft)	*Standard of heating*	*High* (18° F)	*Medium* (13° F)	*Low* (11° F)	*High* (18° F)	*Medium* (13° F)	*Low* (11° F)
1000	Detached single-storey	1020	690	560	700	455	360
	Detached 2-storey	885	600	475	605	390	305
	Semi-detached single-storey or end-terrace	960	645	520	660	430	340
	Semi-detached or end-of-terrace, 2-storey	780	520	410	550	350	270
	Middle-of-terrace 2-storey	675	440	345	500	310	240
1250	Detached single-storey	1280	880	720	890	600	480
	Detached 2-story	1100	750	605	770	510	405
	Semi-detached single-storey or end-of-terrace	1225	840	680	860	575	460
	Semi-detached or end-of-terrace, 2-storey	990	665	540	715	470	370
	Middle-of-terrace 2-storey	880	590	475	660	430	340
1500	Detached 2-storey	1310	900	730	940	630	505
	Semi-detached 2-storey	1200	820	670	885	590	475

NOTE. The above data is on the assumption of simple rectangular house plans. For more detailed estimates, particularly where the plan of the house is complex, the heat loss should be worked out on the lines given in Digest 35.

heat, body heat from occupants), of 170 therms.

To estimate the seasonal fuel requirements all that is required it to divide the seasonal heat loss by the calorific value of the fuel multiplied by the "house efficiency" of the heating system.

Example. For a detached two-storey house of 1,000 sq. ft. with a medium grade of insulation, centrally heated to a high standard by a solid fuel appliance using anthracite, the seasonal heat loss would be about 900 therms. Assuming a house efficiency of 70 per cent. (typical of many central heating systems) and anthracite with a calorific value of 330 therms per ton, the seasonal fuel requirements would be about

$$900 \div \frac{70}{100} \times 330$$

$$= \frac{900}{231} = \text{approximately 4 tons.}$$

For approximate estimates the total fuel requirements can be read directly from the chart above. Applying the above example to the table will explain how it works. It will be noted that a direct comparison can be made between different fuels and between systems with differing house efficiences.

Additional Considerations

Other points affecting the choice of a heating system are convenience in operation and the form of heat distribution. The first is mainly bound up with the choice of fuel; for instance, if a completely automatic silent and dust-free installation is required without special regard for running costs, then an electrical system may be favoured. If cost of running is the main criterion, then a solid fuel system may be chosen.

Heat may be distributed by warm air, convectors, low temperature radiant sources depending on preference and on the design of the house. Warm air systems lend themselves to open planned houses, require no extensive runs of pipes or radiators, and they have a quick response to changes in heat demand. A possible disadvantage is the risk of rather high temperature gradients.

In general, people seem to prefer rather higher temperatures with warm air systems and convectors than with other forms of heating. Floor heating also has the advantage that no pipes or convectors are visible, but there is some restriction on certain types of floor finish, and certain structural precautions have to be observed. Radiant ceiling panels do not restrict the choice of floor finish, but the surface temperature and size of the ceiling panels require to be carefully worked out to avoid overheating at head level. Ordinary hot water radiators are relatively cheap to install and are easily accessible for maintenance, but they tend to collect dust and take up useful space and, unless sited under windows, rapidly soil the walls.

Size of Heating Appliance

The size and number of heating appliances required for a particular heat service depend mainly on the maximum heat demand during a cold spell. For central heating systems it is usual to work from a design indoor/outdoor temperature difference based on an assumed outdoor temperature of 30 degrees F or 32 degrees F. Any miscellaneous gains from solar heat, cooking, etc., should be ignored, as the heating plant must be capable of providing the required indoor temperature under severe weather conditions.

The total heat loss can be worked out in detail on the basis of design temperatures for individual rooms, but Table 2 gives approximate values based on the assumption of an average temperature difference for the whole house. Thus a maximum temperature difference of 30 degrees F could be assumed for whole-house heating and 20 degrees F for background heating systems.

The heat output of domestic central heating boilers can be obtained from manufacturers' catalogues and from the lists of recommended domestic solid fuel appliances issued by the Coal Utilisation Council. The rating should be the "central-heating rating" and not that for "domestic hot water." It is usual to make an additional allowance of some 20-25 per cent. as "boiler margin," which varies according to the type of boiler. This enables the system to be run more intermittently in cold weather and can also be regarded as a safety margin. In a system combining space heating with domestic hot water the allowance for hot water can amount to 10,000-12,000 B.Th.U. per hour and normally this is added to the central heating load.

However, where first cost is a serious consideration there is some argument in favour of ignoring the allowance for domestic hot water, and simply basing the required boiler sizes on the space heating requirements. For all practical purposes the domestic hot water is a by-product of the space heating service and the demands for hot water are only likely to affect the internal temperature by 1-2 degrees F. Only in severe and sudden drops in external temperature is the recovery rate of a central-heating boiler likely to be affected noticeably by a heavy demand for domestic hot water, and this could be countered to some extent by providing a larger hot-water storage tank. If this limitation can be accepted some economy in boiler size may be possible with the further advantage of there being less risk of condensation in the flue serving the boiler because the boiler is required to run nearer to its full capacity. In these circumstances a first estimate of the boiler size is made by simply relating the rated capacity of the boiler to the maximum heat demand as shown in Table 2.

With regard to the selection of separate room heating appliances, if these are to be used intermittently it is questionable whether the technique of heat loss calculation is altogether appropriate. For occasional use of electrical appliances it is usual to allow one watt per cu. ft. of room space, but for living rooms with two or more exposed walls it is advisable to increase the loading to 1½ to 2 watts per cu. ft. In making such estimates no real harm is done if a rather larger appliance is selected than the figures merit, because with intermittent use the only result is that the room is heated more rapidly. For continuous electrical heating on the other hand, e.g., electrical floor heating, it is desirable to estimate the required loading on the basis of a conventional heat loss calculation, but a rough estimate can be made on the basis of 15 watts per sq. ft. of floor area.

Further information on the selection of electrical space heating appliances is given in the B.S. Code of Practice for the installation of domestic space heating equipment, CP 324.201 (1948). The capacities of solid fuel appliances are usually stated in terms of the volume of room they can heat adequately, and information on a large range of these appliances can be obtained from the Coal Utilisation Council. Similar information on gas-fired appliances is given in the B.S. Code of Practice on space heating by means of independent gas appliances, CP 332.301 (1947), and may also be obtained from the local Gas Boards.

Grades of Thermal Insulation

For the purpose of this Digest two grades of insulation are given in the tables, a medium grade, which is in line with the standard required under the revised Model By-Laws, and a high grade. The details of the grades (*U*-values in British units) are:

	Medium grade	High grade
Walls	0.30	0.15
Floor	0.25	0.20
Roof	0.25	0.10
Windows	0.60	0.60

The economic justification for a high grade of insulation diminishes as the standard of heating drops. For example, the reduction of heat loss with unheated bedrooms is much less than with a fully centrally heated house, although the insulation can give a degree or so improvement in internal temperature.

Some indication of the relative effects of insulating various parts of a house in terms of annual fuel saving can be judged from Digest 35. It will be noted that on the assumption that the house is uniformly warmed the roof is the building element where reduction in heat loss is most easily and effectively obtained.

(Concluded on page 424)

Table 2

Maximum mean hourly heat loss (in B.t.u.) in dwellings

(Assuming two air changes per hour, and an average outside air temperature of 30° F; an addition should be made for 'boiler margin')

Floor area		*Insulation grade*			
		Medium		*High*	
(Sq. ft)	*Standard of heating*	*High* (30° F)	*Medium* (20° F)	*High* (30° F)	*Medium* (20° F)
1000	Detached single-storey	36 000	24 000	26 000	17 500
	Detached 2-storey	32 000	21 000	23 000	15 500
	Semi-detached single-storey or end-of-terrace	34 000	22 500	25 000	17 000
	Semi-detached or end-of-terrace, 2-storey	28 500	19 000	21 500	14 500
	Middle-of-terrace, 2-storey	25 500	17 000	20 000	13 500
1250	Detached single-storey	44 000	29 000	32 000	21 500
	Detached 2-storey	38 500	25 000	28 500	19 000
	Semi-detached single-storey or end-of-terrace	42 000	28 000	31 000	21 000
	Semi-detached or end-of-terrace, 2-storey	35 000	23 500	26 500	18 000
	Middle-of-terrace, 2-storey	31 500	21 000	25 000	16 500
1500	Detached 2-storey	44 500	29 500	33 500	22 000
	Semi-detached, 2-storey	41 000	27 500	31 500	21 000

NOTE: The above data assume simple rectangular house plans. For more detailed estimates, particularly where the plan of the house is complex, the heat loss should be worked out on the lines given in Digest 35.

Institution of Civil Engineers

ENGINEERS WILL HAVE TO TAKE GREATER PART IN SOCIOLOGICAL LIFE

SPEAKING at the annual dinner of the Institution of Civil Engineers held in London last week, SIR HERBERT J. MANZONI, C.B.E. president of the Institution, said in time those with a predominantly scientific background would have to take a greater part in sociological and political life. Herein lay both opportunity and danger, the latter because the education system, with its too-early specialisation, and scant opportunity for the leavening effect of the humanities to be imposed, tended to produce a population leaning overfar towards materialism.

The Institution was keenly aware of this and its varied activities were directed to finding a solution.

Sir Herbert was replying to the toast of "The Institution" proposed by Lord John Hope, Minister of Work, who said that he had asked himself whether he came as adviser, friend or client.

Certainly he could not be considered an adviser. The Institution had been founded in 1818 to facilitate the acquisition of knowledge in the profession and the promotion of mechanical philosophy. He was neither a mechanical philosopher nor a civil engineer.

When the Royal Charter had been granted in 1828 the profession had been defined as "the art of directing the sources of power in nature for the use and convenience of man." This illustrated the spirit of confidence and enterprise in evidence at that period of England's history. Now the power of nature had grown to such magnitude that the principal anxiety was to ensure that it did not destroy us.

If, today, the scientist attracted the glamour in the popular mind, it was the engineer who, because his work was directed to the "use and convenience of man", combined in his profession both science and humanity.

It was difficult to foresee the consequences of great engineering works, he said. One of the first and greatest was Hadrian's Wall, which had preserved Scottish civilisation from the northward-moving barbarians! By the 18th century enlightenment had spread south and the wall was no longer needed. Now there were proposals for enabling the English to break down their own southern frontier!

Ministry and Civil Engineering

His Department frequently had to call upon the services of civil engineers, and some of the work involved was of great interest to the profession. The early nuclear reactors had provided experience which was now proving valuable in the construction of nuclear power stations for the Central Electricity Authority.

The Department had constructed prototype test facilities for aircraft engines, and a very large supersonic wind tunnel. A tank testing track constructed by a new method, using stabilised soil, had pioneered a process adopted for the road research testing facilities at Crowthorne. The Ship Hydrodynamics Laboratory at Feltham, recently opened, contained the largest model tank in Europe.

Co-operation between Professions

He and his Department were closely concerned with the construction of large-framed buildings, and this was a field in which special opportunities existed for rendering public service. New methods and materials had led to increasing specialisation in building design, and harmonious co-operation between engineers and architects, especially, had become of growing importance. It would be disastrous if these two professions had each retreated into a neatly defined sphere of influence, surrounded by an iron curtain of established custom. That this had not happened was illustrated by the awarding of the Royal Gold Medal of the Royal Institute of British Architects to an engineer, Professor Nervi, whose great concrete structures had earned the admiration of so many.

It was often on the border between two disciplines that the seed of a new and creative idea had grown and flourished. He could only hope, therefore, that a fruitful commerce of ideas and co-operation would continue, and grow, between the two provinces.

He had been told that physicists had discovered that the molecules of a gas were in ceaseless random motion at all times unless it was at the absolute zero of temperature. Flying in all directions at great speeds, they rebounded from one another constantly. It was termed the Brownian movement, but it reminded him somewhat of the transport problems of their country.

The profession was doing much to make it possible to go about one's business with reasonable freedom from obstruction. He had in mind the London-Birmingham Motorway and other motorways in contemplation, the mainline London-Midland electrification, and the construction of a heliport in the heart of London.

British engineers had a deservedly high reputation in all parts of the world, and might well be called one of Britain's important invisible exports.

Major Industry

Sir Herbert Manzoni said that civil engineering was indeed a major industry. Work to the value of £500m. had been carried out in 1959. Moreover, projects carried out abroad by British civil engineering contractors had been of the order of £100m. It ranked seventh in magnitude among individual exports, and formed one-thirtieth part of the whole overseas trade of the country.

Few realised that the profession had been responsible for the building of more than half of the 3,500,000 houses constructed since the First World War, and an even greater proportion of all the town planning undertaken.

All over the world welfare and health standards were rising—very largely as the product of engineering projects. Cultural and moral development must surely flow from, not precede, the raising of physical standards.

Aesthetic Appreciation

However, aesthetic appreciation was not the prerogative of any particular professional discipline. It was more a matter of heredity: of the disposition of one's genes. However, it was possible to impose an awareness of aesthetic values upon people completely immune from aesthetic appreciation. This was essential if the finished work was to bear the imprint of harmony.

They were advancing rapidly, he said, towards an increasingly scientific age. Governments everywhere were striving to educate a higher proportion of their people in the scientific professions so that they might make use of the new discoveries being made. On the latest figures, the proportion in the U.S. was four in every 10,000; in Russia, six; and in the United Kingdom, three only. Attempts were, of course, being made to increase their own figure.

LOWEST TENDER POLICY IS SHORT-SIGHTED, SAYS SPORTS CONTRACTORS' CHAIRMAN

"GOOD sports ground construction is not just a question of levelling and grading and turfing or seeding," said Mr. D. A. B. Morgan, chairman of the British Association of Field and Sports Contractors, at the Association's annual luncheon in London recently.

Infinitely more detail must be considered, such as pH of soil, types of fertiliser and weed killers, special grasses for specific sports and so on.

Mr. Morgan said that the association was a body of experts in the construction of all kinds of sports grounds. But recently they had been somewhat discouraged by people who adopted the short-sighted policy of always accepting the lowest tender, even though it came from an unskilled firm. returned from viewing the preparations bin

He announced that he had recently returned from viewing the preparations being made in Rome for the Olympics, where over 80 acres had been laid out in hockey and football pitches, running tracks, etc., and more than a dozen swimming pools had been constructed, one of them accommodating over 3,000 swimmers and 30,000 spectators. The main stadium could seat 100,000, had 66 entrances and could be cleared in ten minutes. There were several other stadia, seating anything from 20,000 to 60,000, and an attractive village had been built to house 7,000 competitors in comfort. After the Olympics, all the sporting facilities were to be retained for public use.

All this, thought the chairman, should be a challenge and inspiration to us. We had always been considered a sporting nation, he said, but all too often in recent years the emphasis had been on how sportingly we lost. Always excuses were made about our lack of training or lack of money, or both—but little was done.

He suggested that a definite and substantial sum from the football pool industry should be ploughed back into sport and not lost in the general revenue of the country. In this way a central fund could be established and used where needed.

The association's principal guest at the luncheon was Mr. C. S. P. Dale, secretary of the Amateur Athletic Association's Development Committee, who called for a strengthening of the relationship between the two associations. He said that many new tracks were falling below standard and in consequence the A.A.A. were preparing a grading system for tracks.

Some local authorities, he stated, produced bills of quantities which were most peculiar, and made mistakes in their playfield construction through not approaching the A.A.A. or the B.A.F.S.C.

Mr. Dale thought it strange that the treasury could release £125,000 for the purchase of a work of art yet made no money available for physical recreation. He said that £125,000 would build about 20 running tracks.

The Trent River Board has approved a £5m. scheme to protect the tidal reaches of the Trent against flooding. The work will take 10 years to complete.

Men and Movements

MR. DAVID C. HANEY, who has been director of sales for International Harvester Company of Great Britain, Ltd. since 1954, has been appointed assistant managing director of the company. At the

D. C. HANEY H. D. FRYMIRE

same time, **Mr. H. D. Frymire,** who has been manager of domestic sales since 1957, has joined the board and becomes director of sales.

The deputy chief executive of the London office of the International Road Federation, **Mr. W. G. Kennedy,** is making a tour of six Far Eastern countries. His itinerary includes Hong Kong and Singapore, where it is proposed to set up road federations, and Thailand, Malaya and Burma, where the possibility of forming such federations is being investigated. As part of his programme Mr. Kennedy will also attend the zonal meeting to be organised by the United Nations Economic Commission for Asia and the Far East at Dacca, East Pakistan, in June.

The new president of the Leicester and District Building Trades Employers' Association is **Mr. R. Curtis Weston,** in succession to **Mr. H. Davis Herbert.**

Mr. A. Anderson, who has recently resigned from his position as manager of Broderick and Ryan, Ltd., has now been appointed to the board of Highway Contractors, Ltd.

Newton Chambers and Co., Ltd. have appointed **Mr. Colin McL. Cameron** as group engineer. His duties will be consultative, and he will be chiefly concerned with the development of large excavators. Mr. Cameron was chief engineer with Ransomes and Rapier, Ltd., from 1953, and his successor in this post is **Mr. Alfred T. Heath.**

Mr. R. F. H. Seager, head of purchasing department of Christiani and Nielsen, Ltd., since 1953, has been appointed chief buyer, group supplies department, Cementation Co., Ltd.

Westminster Plant Co., Ltd., have appointed **Mr. L. Ross** buyer and hire manager. He will be located at the firm's New Cross depot.

Mr. E. N. Hightom, a director of Dorman Long and Co., Ltd., sailed on the "Queen Mary" recently for New York.

A Paper, entitled Planning and Controlling City Growth, will be given at the R.I.B.A. next month by **Senhor Luis de Guimaraes Lobato,** the Portuguese planner. Senhor Lobato is the director of the technical division of the Gulbenkian Foundation and in 1954 he headed, as consultant to the Municipality of Lisbon, a study group to revise and complete the planning of the city. He was responsible until 1958 for the elaboration of the Master Plan for Lisbon and for the design of other urban schemes of housing, roads, traffic improvements and of new neighbourhoods, and he was the author of the final report of the commission appointed by the Government to study the crossing of the Tagus in Lisbon by a suspended bridge.

SENHOR LOBATO

Fred Myers, Ltd., have announced the appointment of **Mr. John Nichols** as head of the company's sales promotion and publicity department. Mr. Nichols, who will be located at the London sales office, has been with Fred Myers, Ltd., for over six years, the last two of which he has spent as sales representative in the south-west area of the dealership's Caterpillar tractor territory. The company have also an-

J. NICHOLS T. SHAKESHAFT

nounced the appointment of **Mr. Trevor Shakeshaft** as Caterpillar tractor and equipment sales representative. Mr. Shakeshaft who was previously with Road Machines (West Drayton), Ltd., will take over part of the area vacated by Mr. Nichols.

The Tempered Spring Co., Ltd., Sheffield, have appointed **Mr. Eric Larner** as manager of a new division recently created for handling the Rollpin, a spring-type cylindrical fastener. Mr. Larner was previously with Linread, Ltd., Birmingham.

Sir Ronald L. Prain, chairman of the Rhodesian Selection Trust Group of Companies, has relinquished the chairmanship of the management committee of the Copper Development Association after 10 years in that office. He has been succeeded by **Mr. E. C. Baring,** a director of the Anglo-American Corporation of South Africa, Ltd., and vice-chairman of the Council of the Association of which Sir Ronald will remain as chairman.

Mr. Trevor Knox, marketing director of Massey-Ferguson (U.K.), Ltd., has resigned from the company.

(Concluded from page 422)

If ventilation is excessive in winter the extra heat loss will, with a well-controlled heating system, mean additional fuel consumption. If, for instance, the ventilation rate of a house is one air change per hour higher than necessary, the total heat loss from a house could be increased by some 20-30 per cent. Where the heating system is not designed to respond readily to the temperature changes a serious drop in room temperature may result. There is much to be said, therefore, for keeping the ventilation rate in winter down to the minimum requirements of the occupants. Loss of heat in a house through ventilation rates in excess of this can be produced by infiltration of air through gaps around external doors and windows and through flues serving heating appliances. To reduce the infiltration through gaps in windows, etc., various forms of weather-stripping are available. In any case, the weather-stripping of front and back doors is well worth while.

The combined effect of weather-stripping and restriction of open fire flues is largely unpredictable because of individual varying habits in opening windows. In general the air-change rate for a small house with untreated doors and windows has been found to be about 2-3 changes per hour according to the exposure and the form of heating system. The result of weather-stripping would probably reduce the general air change rate by about ½-1. The reduction of the air flow in a flue is not likely to affect the overall rate very much, but it will affect the ventilation rate for the room in which the appliance is situated. For conditions of normal exposure, therefore, a general average ventilation rate through the house of two air changes per hour can be assumed, as used in the foregoing tables.

Air flow in flues can be reduced by internal dampers or throat restrictors, which can be opened up to prevent smoking when the fire is lit and closed when the flue is hot and the draught increased. The limit on restriction of the flue is the lowest rate of air flow that the appliance will tolerate without the fire smoking. With ordinary open fires the lowest tolerable rate is probably about 4,000 cu. ft. to 5,000 cu. ft. per hour; and with fires with larger openings the rate required to prevent smoking will be even higher. However, there are now on the market improved fires which will operate satisfactorily with air flow rates of 2,000 cu. ft. to 3,000 cu. ft. per hour, and it is thus possible to bring the air change rate through the flue itself down to a reasonable figure for the occupants of the room in which the appliance is situated.

An alternative approach is to incorporate ducts to carry air direct from outside to the flue—in effect to by-pass the room air. These ducts work best if the other inlets to the room are reduced by weather-stripping, but if the internal doors are left open the flue will still draw air at a high rate from the rest of the house; it would appear that, no matter what type of fire is used, it should have a flue damper to limit the air flow. Ducts may also be used to bring a smaller quantity of air direct to the fire-bed to provide better and quicker combustion control, but this does little to reduce the amount of air drawn from the room.

References

The following publications give more detailed information:

Digest 35 gives the potential heat losses from the different parts of a typical small dwelling.

The Thermal Insulation of Buildings, by G. D. Nash, J. Comrie and H. F. Broughton (H.M.S.O., 12s. 6d. net) shows how to work out *U*-values and gives data on materials used for thermal insulation and tables of comparative costs and efficiences of a wide range of treatments to roofs, walls and floors.

Digest 93 gives comparative costs of various types of domestic heating installation.

Digest 94 gives an estimation of seasonal heat requirements and fuel consumption in houses and flats.

Digest 120 (pages two and three) supplements Digest 94 with graphs showing how to compare the costs of fuels.

Digest 60 describes methods to reduce the risk of condensation in boiler chimney flues and what to do if trouble has already occurred.

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WORK BEGUN ON MANCHESTER'S £3½M. PICCADILLY CENTRE

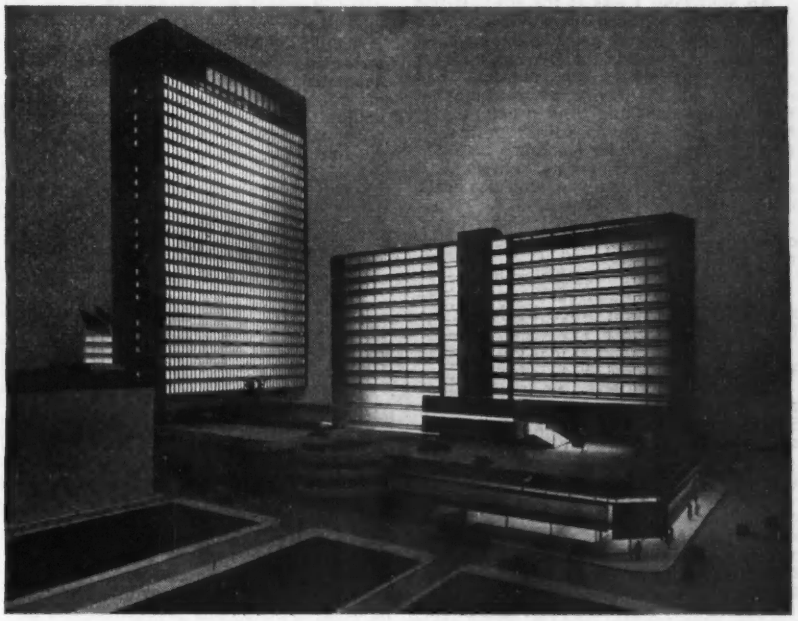
BUILDING operations have now commenced on the 2½-acre site fronting Parker Street, Manchester, on which will rise the new £3½m. Piccadilly Centre.

With this development, which is being undertaken by Bernard Sunley and Sons, Ltd., for Piccadilly Manchester Properties, Ltd., the whole of the site will be covered by a structure comprising basement, ground and first floors, with sub-basements over parts of the site. Surmounting this structure from a roof deck will be three buildings: a 300-bedroom hotel, eight- storeys high or eleven above street level; a 330ft. high office block of 27 storeys or 30 above street level; and a small office block of six storeys or nine above street level.

The basement development will be largely devoted to the provision of parking space for cars. Including space at roof level, there will be accommodation for some 500 cars.

The ground floor is primarily for shops and stores, but the plans include a petrol filling station, approached off York Road. The shops will be surrounded by covered arcades which will be gently heated by overhead electric radiant heaters.

Access to the hotel and office blocks is provided both for pedestrians and cars—pedestrians by escalator from the arcades below and cars by ramps. On the podium, or roof deck, will be a taxi rank, three floors above the street. Ornamental gardens, sculpture, fountains and rest centres are proposed for the roof deck.



A model of the completed project

The entrance to the hotel will be open and cars and taxi-cabs will drive straight into the reception hall, which will be enclosed by a curtain of heated air. A special ventilation system will extract exhaust fumes.

Each bedroom will be convertible into a sitting room with radio and television and will have a private bathroom suite. Projecting outwards from the main part of the hotel will be a restaurant and banqueting hall. The main dining room will have one side completely of glass overlooking Piccadilly Gardens. On top of the hotel will be a roof garden.

On the top two storeys of the office block, which will be one of the highest buildings in the United Kingdom, there will be a foyer and bar, and a panoramic restaurant with a viewing terrace 320ft. above street level. From here it will be possible to see the sea and the distant hills of the Lake District. The core of this office block will go down to the arcades of the shopping centre and through the basement and sub-basement. It will stand on 12 massive columns above the shopping centre, the whole structure being supported by the sandstone rock formation 50ft. below ground.

Work is well in hand on the excavation and foundation work of the first section of the scheme, which will be the basement, car park and shopping centre at the Mosley Street end of the site, and the 30-storey tower block of offices. It is estimated that tenants will begin to move into the new centre in two years.

The architects are Covell and Matthews. Other consultants include: structural engineers, Leonard and Grant; heating and ventilation consultants, G. H. Buckle and Partners; and quantity surveyors, C. William O'L. Markham.

GETTING TO KNOW THE CONTRACTOR

A plea for closer collaboration between the client and the contractor is made by Mr. W. H. G. Roach, managing director of William Press and Son, Ltd., in the April edition of his firm's house journal "Expression."

Mr. Roach says that it may very well be in the client's interest to collaborate with the contractor at the design stage of any project. It will certainly enhance the team spirit when the time for construction arrives if both client and contractor have had an interest in the development of the work from its inception.

Direct Labour

Mr. Roach also refers to the decreasing body of opinion which advocates direct labour for the execution of constructional projects. He points out that in the gas industry the inevitable fluctuations in the volume of work make it impossible for a Gas Board to employ on a permanent basis enough men and plant to handle the peak volumes of work in its area.

Even on routine work not requiring costly specialised plant, contractors can give more economical service than direct labour, says Mr. Roach, because a contractor's whole organisation is keyed to making a living out of that particular kind of work in a highly competitive field.

27-STOREY BLOCK IN BRIGHTON REDEVELOPMENT PROPOSAL

ELEVATED walkways for pedestrians, the confining of motor traffic to lower levels and two-tier shopping are features of the Taylor Woodrow Group scheme for reconstruction of the 11-acre site between Grenville Place and Kings Road on the sea-front at Brighton.

This is one of the three redevelopment projects for the area short-listed by Brighton Borough Council and now before the Royal Fine Art Commission. It provides for a large piazza with various buildings on three main levels.

The walkways on the upper levels would be for pedestrians only. All parking and service roads to the buildings would be entirely separate and beneath them. Motorists, after parking their cars, would reach the pedestrian ways largely by staircases, although some ramps would be included. The existing thoroughfare, Regency Street-Upper Russell Street, would continue to run straight through the site below the pedestrian concourses.

Pedestrians would reach the piazza from 12 main points including a bridge direct from the esplanade and beach, escalators from the sea-front and a bridge at the rear of the site across Grenville Place.

There would be seven main points of access for motor traffic. Underground parking is planned for 1,500 cars in addition to garages for permanent residents.

Other features of the scheme, which would be carried out by Myton, Ltd., a member of the Taylor Woodrow Group, include a sea-front block of flats of cruciform shape with a 27-storey tower which, with another tower block, would provide more than 350 flats in all.

Market research has indicated that there is a great demand for additional shopping in Brighton. To meet this the scheme includes a large department store comprising some 88,000 sq. ft., a supermarket of 10,000 sq. ft., and nearly 150 other shops. The shops within the sheltered piazza would be in two tiers with those on the upper level having shoppers' galleries. The upper level shops would have stores at the rear of their premises and the lower level shops would have stores below them.

Among other facilities proposed there will be a sea-front conference hall accommodating 2,500, tea rooms, public house and possibly a casino. Some 67,000 sq. ft. of office space will be provided and 50 maisonnettes. Special attention has been given to landscaping—lawns, flowering shrubs, pools and a fountain are envisaged in a public garden area.

Architects and planning consultants are Russell Diplock Associates, 235 Vauxhall Bridge Road, London, S.W.1.

Talking of Safety

by "DRAGEE"

IT is sometimes said that the investigation of accidents is a waste of time, like bolting the stable door after the horse has gone.

This might be true if the sole purpose of investigation were simply to collect material for a routine report, which would then be filed away and forgotten. A safety officer's accident report has one overriding purpose: to provide information which will assist in preventing a recurrence of the accident. If it is to be of value, the investigation must be carried out very soon after the accident, otherwise conditions are liable to change and obscure the facts, and memories become blurred.

On a recent occasion I had just returned to the office from a weekend conference when my assistant came into my room with a slip of paper.

"I'm afraid there's been rather a bad accident at New Dock," he said. "A chap called Pritchard fell 20ft. from a scaffold and broke both legs. He's at the local General Hospital and the last report was that he was as well as could be expected."

"When did it happen?"

"Last Friday morning—while you were travelling. I phoned Simms, the Site Engineer, and asked him to let us have a quick preliminary report. Unfortunately he was taken ill during the morning—nothing serious, but he had to go back to his lodgings. A sharp dose of 'flu, I think. Anyway, we didn't get a report, so I had to find out all I could from the foreman."

"How much did you pick up?"

"He wasn't able to help very much. It appears that Pritchard was fixing a length of rainwater pipe when one of the scaffold boards suddenly gave way, and he came down with it. It was one of three 9in. boards, 13ft. long, resting on four putlogs. The platform was fitted with handrails and toeguards."

"The board hadn't broken?"

"No—that's the queer thing about it. Apparently Simms inspected the scaffold personally when it first went up, and then again the following morning. He's pretty careful, as you know, and he'd made a record of it in the register."

"Why did he inspect it twice? Was there something wrong the first time?"

"I've no idea. That's all I heard."

"Right. Thanks. I'd better go over there right away."

An hour later I was at the site. It was the tidy kind of place one would associate with a careful and painstaking engineer like Simms. Johnson the foreman took me to the spot where the accident had occurred. On the way he informed me that Pritchard was making good progress. He had also had a phone call from Simms' landlady to say that he was much better.

"Well, that's something, anyway," I said. "Tell me, have you any idea what happened?"

"Not really. All I know is that a board came loose somehow and he fell through the scaffold with it."

"Have you questioned the scaffolder?"

"Yes, but he couldn't tell me much. He says it was all right when he left it on Friday morning."

"So he did something to it on Friday after Mr. Simms had inspected it?"

"Yes, he had to level the outer row of planks which was canted up a bit. Mr. Simms looked over it again in the morning shortly before Pritchard used it."

"I'd like to have a word with the scaffolder, if you don't mind."

While we waited I gave a quick glance over the structure. It was a simple putlog scaffold, apparently well constructed and braced. I was puzzled and rather worried. But Ted, the scaffolder, soon gave me the first hint.

"After Harry Pritchard fell, I noticed the far end putlog, hanging down. I thought I'd better fix it straight away in case someone else was going to use the platform. I suppose it got knocked out somehow when Harry fell."

"I don't think that's very likely," I said. "Tell me, what alterations did you make after Mr. Simms first inspected the scaffold on Thursday afternoon?"

"I had to force the outer row of boards down a bit. The edges were hard against the uprights and tilted."

"Do you think that might have pulled the putlog out of the wall?"

He thought for a moment. "Well, it could have loosened it, I suppose, but it certainly hadn't come right out."

"Did you notice what Harry was doing just before the accident?"

"He was drilling a hole in the wall with a hand brace when I last saw him working. He seemed to be having a pretty tough job of it, too."

That appeared to account for everything. A close examination of the platform showed clearly that the reaction to the pressure against the wall had forced the end of the platform outwards, and the already loosened putlog had been pulled away. Pritchard had been standing at the end of one of the boards, and this had tilted downwards, throwing him to the ground.

No doubt Simms would have quickly arrived at the same conclusion, but as it happened we were nearly baffled by the prompt and well-meaning action of the scaffolder whose immediate idea was to repair the damaged platform as speedily as possible. The idea was absolutely right.

"Dragee," who is a practising safety engineer, would welcome subjects for discussion in this column. All names of persons mentioned in these discussions are entirely fictitious. Questions of law are expressed as the author's personal opinions and are not claimed to be authoritative.—EDITOR.

FOR THE DIARY

April 29.
Reinforced Concrete Association (West of England Branch). Meeting at the New School of Engineering, University of Bristol at 6 p.m. "Precasting in Concrete Framed Construction," by J. F. Greinig, A.M.I.C.E., and R. C. Westbrook, A.M.I. Struct.E.

May 3.
Symposium on London/Birmingham Motorway at the Institution of Civil Engineers, Great George Street, London, S.W.1. at 2.30. p.m.

Annual General Meeting of the Royal Institute of British Architects at 66 Portland Place, London, S.W.1, at 6 p.m.

May 3-13.
Mechanical Handling Exhibition, Earls Court, London.

May 4.
Annual general meeting of the North West Branch of Contractors Mechanical Plant Engineers, Kirkby Executive Club, Kirkby Trading Estate, near Liverpool.

Annual conference of the Institution of Plant Engineers, Scarborough, May 4-6.

May 18-19.
Symposium on "Problems in the Design of High Buildings" at the R.I.B.A., 66 Portland Place, London, S.W.1.

May 20.
Annual General Meeting of the Contractors Mechanical Plant Engineers (Midland Branch) at the Imperial Hotel, Temple Street, Birmingham, at 7.30 p.m.

June 4.
Annual General Meeting of the North Western Educational Association for the Building Industry at Peel Park Technical College, Salford, 5, at 11 a.m.

June 21-24
Annual conference of the Institute of Sewage Purification, Scarborough.

June 30-July 3.
Sand and Gravel Association of Great Britain. Short Course on "The Production and Technology of Sand and Gravel Aggregates," at the Imperial College of Science and Technology, South Kensington.

July 20-24.
Institution of Municipal Engineers. Northern Districts Summer School at the University of Sheffield.

Aug. 30-Sept. 3.
Royal Institution of Chartered Surveyors. Annual Conference at the University College of North Wales, Bangor.

STREAMLINING THE EDUCATIONAL BUILDING PROGRAMME

The school building programme for 1960-61 marks the beginning of five-years increased effort to improve the quality of primary and secondary education. Large building programmes are also in hand for technical education, for the training of teachers and for other educational services.

These programmes will place a considerable burden on the technical and administrative staff of many local education authorities, and in a recent circular, the Minister of Education, Sir David Eccles, has therefore asked all the authorities concerned to review their arrangements for handling education projects, and to consider whether anything more can be done to streamline procedures and improve efficiency.

In particular the Minister has expressed the hope that authorities will take full advantage of the longer notice now given of future building programmes to begin acquiring sites in good time, and to decide their architectural staffing (including where necessary the employment of private architects) well ahead.

For his part, Sir David has decided to make the following changes: (a) to follow compilation of the 1962-63 school building programme by settling on a provisional basis the main lines of the programmes for 1963-64 and 1964-65; (b) to speed up the final approval of plans and estimates of cost for new county and controlled schools, by introducing a system of certification that the main controls have been complied with; (c) as part of (b) above, to introduce a unit formula for the calculation of premises grant on accommodation provided in new schools for the meals service; (d) to simplify the procedures for certain minor projects.

He has also reviewed the limits of cost for new schools, technical colleges and other educational buildings, and has decided that some easement is now required if authorities generally are to maintain a reasonable standard of building and avoid excessive future maintenance costs.

LOANS SANCTIONED

The following loans were sanctioned by the Minister of Housing and Local Government to local authorities in England and Wales during the quarter ended March 31, 1960: Housing (land, dwellings, roads, sewers, etc.) and advances and grants under Housing and S.D.A. Acts, £88,297,426; sewerage and sewage disposal, £10,021,265; water supplies, £8,935,205; highways, £3,586,681; public lighting, £1,412,926.

International Construction

SOUTHERN PACIFIC BRIDGES AN INLAND SEA

From a Correspondent

CONSTRUCTION of a 12½-mile solid-fill roadway across Great Salt Lake in Utah, U.S.A., is now nearing completion. This undertaking, four years in the making, and involving 36,000,000 cu. yd. of fill materials, should be finished (the fill stage) by the summer. Southern Pacific's cross-country trains will probably travel over the new course early next year.

Allis-Chalmers HD.21G tractor shovels at the stockpiles

For nearly half a century, a 13-mile trestle bridge has been used for crossing Utah's inland sea, but creeping old age and mounting maintenance costs prompted action for the new construction which is being erected by contractors, Morrison-Knudsen Co., Inc., employing a £5m. fleet of land and marine equipment and 680 men.

Location of the new £17m. structure runs parallel with the old trestle bridge only a few hundred feet away. Width at the base of the causeway fill varies from 175ft. to 480ft., and depth of the fill measures 85ft. to 102ft. The crest is 17ft. above the water surface and the width 38ft. which will accommodate a double set of tracks.

These figures tend to conceal the real dimension of the work. Some of the largest non-atomic blasts in history were made to supply fill materials for this job. One detonation, powered by more than 2,000,000lb. of explosives, yielded 3,700,000 cu. yd. of broken rock.

Eleven barges, fabricated at the job site, were employed to handle the bulk of the dumping. Six of the barges are of the bottom-dump type with capacities of 2,000 cu. yd. each. Five are flat-top deck barges capable of hauling 1,000 cu. yd. each.

Before any fill could be placed, 15,200,000 cu. yd. of soft sediment had to be dredged ffrom the lake floor to provide a firm footing for the causeway. When this was accomplished, the bottom-dump barges proceeded to deposit materials along the course of the roadway foundation.

This method of depositing fill was employed until the fill reached within 12ft. to 15ft. of the surface. The 11½ft. draft of the bottom-dump barges prevented their use from this point on. The flat-top barges were then put to work; the fill materials being pushed over the side by tractors.

Partially completed section of the 12½-mile causeway

Finally, as the causeway embankment emerged from the surface, trucks and a train using side-dump cars finished the job.

Composition of the embankment consists primarily of sand and gravel with quarry-run rock used for facing on the tapering sub-surface slopes. Derrick stone, weighing 1 ton to 3 tons each, is used for protection of the embankment faces exposed to wave action.

Keeping the barges fed with fill materials was accomplished by two methods. The first involved the use of a spectacular conveyor system stretching two miles from a sand and gravel quarry to the lake shore. The £700,000 conveyor system, which is said to be the worlds largest in terms of tonnage, moved 4,000 tons to 4,200 tons per hour.

A second method of conveying materials to the barges was by the use of a fleet of 17 cu. yd. dump trucks. At the stockpiles, four 225-h.p. Allis-Chalmers HD.21G tractor shovels and six electric shovels kept the procession of some 37 dump trucks moving to the barges with quarry rock. The HD.21Gs also operated on the flat-top barges, pushing fill materials on to the sub-surface embankment.

The fill placement is now virtually completed and soon cross-country trains will traverse the new 13-mile Great Salt Lake causeway—certainly one of the outstanding construction achievements of our time.

MULTI-STOREY OFFICES PLANNED IN GHANA

West Africa's first skyscraper office blocks are to be built in Accra by a Ghanaian company, in association with British financial interests, according to a London announcement.

Two 26-storey blocks, linked by a four-storey shopping centre, are to be erected on a site of 4½ acres in Kwame Nkrumah Avenue, leased to P. C. Hutchinson (Ghana) Investments, Ltd. Associated with the company in this £2m. project are City Business Properties, Ltd., of Norfolk Street, London.

Further leases of land, involving more than 30 acres, have been granted to P. C. Hutchinson, who—again in collaboration with their British associates—will be erecting other office blocks in Kwame Nkrumah Avenue, in addition to the skyscraper already planned. Luxury houses and flats and medium-priced residences, as well as commercial buildings, are also on the development schedule.

Architects and Contractors

The architects of the two 26-storey office blocks are Guise, Davies and Upfold, of Granville House, Sloane Street, London, who have already established their offices in Accra. William Upfold, the partner-in-charge of the operation, has already made several working visits to Ghana to acquaint himself with local conditions.

While some of the building projects will be undertaken by the Ghana National Construction Company, others will be put out to tender. Sub-contractors in Britain who have already been named for the first phase of this development are C. F. Taylor (Metal Workers), Ltd., Wokingham; The Freeman Heating and Engineering Company, London; and Rashleigh Phipps and Co., Ltd., Manchester.

MADRAS PORT TRUST BUYS QUARRY PLANT

The Madras Port Trust have purchased a quarry plant from Frederick Parker, Ltd., Leicester, to produce aggregates for improvements and extensions being carried out in Madras Harbour.

The plant, which will produce 300 tons of material per day, is for crushing, conveying and screening material and includes primary and secondary "Rocksizer" roller bearing crushers.

The Trust are doing their own structure work and storage bin units to Parker drawings.

Trade Section

ALUMINIUM ALLOY PASSENGER CONVEYOR

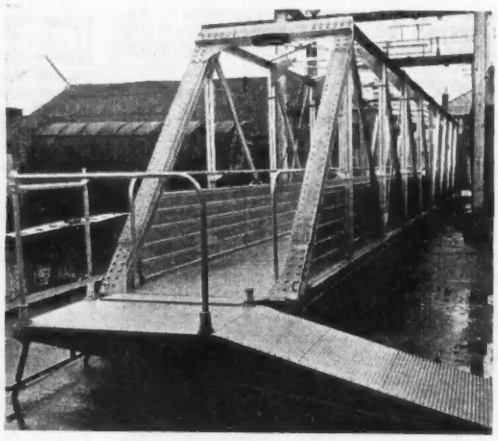
A DESIGN for an aluminium alloy footbridge or gangway, for use where light weight and freedom from maintenance are important factors, has been evolved by Non-Corrosive Metal Products, Ltd., Horton Road, Yiewsley, Middx.

The first of these structures was recently dispatched from their works to Tema, Ghana, for installation as a passenger conveyor in the new harbour terminal.

It has an overall length including ramps, of 86ft., and a span between supports of 75ft. Clear inside height is 8ft., and inside width between handrails is 4ft. The weight of the structure is 1 ton 14cwt. A test load of 100lb. per sq. ft., or 13 tons 10cwt., produced a deflection at the centre of the span of 1.22in.

A bolted and riveted construction is used, the units comprising: uprights, 1⅞in. by 2½in. bulb angles at 7ft. 6in. centres; diagonals, 2in. by 1½in. bulb angles; top cords, 3½in. by 2⅝in. channels; bottom cords, 5in. by 2½in. channels, stitch riveted back to back; roof cruciform, 2in. by 2in. single bulb angles; tranverse stiffeners on roof, 2¼in. by 2¼in. bulb angles; longitudinal and transverse floor members, 3in. by 1½in. lipped channel placed back to back.

Alloy corrugated sheeting is provided to a height of 2ft. 8in., and the handrail level is 3ft. 3in.



The conveyor, before dismantling for shipment to Tema

TRADE ASSOCIATIONS TO AMALGAMATE

Two trade associations have agreed in principle to amalgamate. They are the Building Industry Distributors, representing builders' merchants, and the British Federation of Plumbers Merchants.

At their meeting in London recently, the Council of B.I.D. heard that discussions were going on about the formation of a new organisation to replace the existing two bodies. April 1, 1961, has been set as the target date for the new arrangement to come into operation.

"We hope this may be the forerunner of the uniting of many similar associations to which we all belong," said Mr. K. J. Fisher, president of B.I.D.

NEW T.D.A. PUBLICATIONS

Two new publications have recently been added to the range of literature issued by the Timber Development Association. The first, a booklet headed "Timber Roofs for Factory Buildings and the Thermal Insulation (Industrial Buildings) Act, 1957," sets out some of the ways in which timber can best be used to meet the requirements of the Act.

The second, a leaflet headed "Some Points on the Fire Endurance of Timber Structural Frameworks," distinguishes between the fire endurance and the combustibility of structural materials.

Copies of both publications can be obtained from the T.D.A., 21 College Hill, London, E.C.4.

REMOVABLE RECESSED LIGHT FITTINGS

A new recessed light fitting has been developed by Campbell Denis, Ltd., 48a Elizabeth Street, London, S.W.1, in conjunction with Utility Lamp and Fittings Co., Ltd.

The light fittings, which have been designed for use with expanded metal ceilings, and which may be modular, are made to accommodate 2ft., 4ft. and 5ft. lamps, with one, two or three lamps per fitting. With the system, a calculation on 80 sq. ft. of ceiling per fitting shows that access can be gained to 85 per cent. of the ceiling void.

The method adopted to make the fitting quickly demountable lies in the removal of two surface screws freeing the diffuser and at the same time unclamping the fitting. To remove the fitting itself a lift and tilt action disengages it from its bearers, the flex connector is disconnected, when the whole unit can be removed.

SYNTHETIC RUBBER JOINT SEALING STRIP

A synthetic rubber joint sealing strip, which has been used for many years in Canada and the United States, is now being marketed in the United Kingdom by Minnesota Mining and Manufacturing Co., Ltd., London, W.1.

The product, known as "Ribbonseal", is stated to provide an effective and durable weatherproof seal in joints where tolerances can be closely controlled. It is composed of solids, will not shrink, is non-inflammable and non-toxic and will not craze plastic surfaces.

ACQUISITION APPROVED

The offer by Amalgamated Roadstone Corporation, Ltd., to acquire the Outstanding Minority Shares in its subsidiary, Amalgamated Limestone Corporation, Ltd., has been accepted by the holders of more than 90 per cent. of the Outstanding Shares and the acquisition has been approved by a general meeting of the Roadstone Corporation.

FLY ASH AGENTS

Stephenson Clarke, Ltd., Glasgow, announce that they have been appointed the sole agents to the South of Scotland Electricity Board for the commercial development and sales of fly ash outputs at the following generating stations: Braehead, Glasgow; Portobello, Edinburgh; Kincardine, Kincardine; and Barony, Ayrshire.

Some 400 people, including overseas buyers and representatives from Government and Service departments, attended the three-day exhibition and demonstration of contractors' plant held at Grays, Essex, by Thos. W. Ward, Ltd. Seen (left) is a general view of the exhibition and demonstration and (right) a Marshall 4-wheel drive 4-wheel steer tractor being demonstrated. This machine, which is a prototype, is being developed in conjunction with M.E.X.E., for military purposes but possible industrial use is under consideration

Trade Section

MORE DRIVER-COMFORT IN NEW MORRIS 1½-TON TRUCK

WHILE there are several new mechanical components, emphasis has been placed on driver-comfort in the new Morris 1½-ton series IV truck announced by The Nuffield Organisation, Cowley, Oxford.

The cab doors are forward opening and set at an angle to the rear, leaving room for a large rubber-covered step behind the wheel arch. A large, deep-curved windscreen is fitted together with glass panels in the lower front corners to eliminate blind spots, and there is an ample window at the back of the cab.

Triangular quarter lights are provided, with a rear portion which opens for ventilation, and in each door there is a balance drop window.

Load distribution has been improved by the use of a forward control cab. The driver's seat adjusts vertically and fore and aft, and the instrument panel is positioned directly in line with the steering and the driver and is cowled to prevent reflections of the instrument lighting in the windscreen. The panel includes a speedometer, oil pressure gauge, ammeter and fuel gauge, and a no-charge warning lamp.

The vehicle can be supplied with a drop-side or platform body. Alternatively it is available in chassis/cab condition or as a chassis and front end. It may be powered by a four-cylinder B.M.C. 2.2 litre petrol or diesel engine.

The gearbox gives four forward speeds and reverse, and is synchromesh except for first and reverse. Gear ratios are: first — 4.63 : 1; second — 2.69 : 1; third—1.57 : 1; fourth—1 : 1; reverse—5.93 : 1. The clutch is a Borg and Beck S.D.P. of 10in. diameter with shock springs.

Transmission comprises open tubular balanced propeller shafts with needle roller bearing universal joints. The large centre bearing with housing is rubber-mounted on trunnions.

The new 1½-ton Series IV truck

Girling hydraulic brakes, 12in. by 1¾in. are fitted front and rear and the hand brake is mechanically connected to the rear wheels. The wheels are steel discs with five-stud fixing, 6.00 x 16 S.D.C. rim, and the tyres, 7.50 x 16, 8-ply. Steering is by cam gear H-type (worm and cam) equipment with a ratio of 18 : 1 and an 18in. diameter steering wheel.

BLAST FURNACE DEVELOPMENT AT STANTON

THE installation of equipment for the production of expanded slag by a process entirely new in this country is the most recent development at the blast furnace plant of The Stanton Ironworks Co., Ltd., near Nottingham.

The method of manufacture, known as the Kinney-Osborne process, is one widely used in the United States. As the slag leaves the blast furnace it is expanded by steam and compressed air, and then solidified by atomised water, giving a product with a uniform honeycomb texture and controlled density.

The product is stable and inert, containing neither free sulphur nor combustible matter, and there are no chemicals present which can adversely affect iron or steel. In this regard it is very similar to pumice and other such naturally found materials.

The manufacturers state that expanded slag is suitable as lightweight aggregate, and possesses useful insulating and fire-resisting properties, which make it valuable for the manufacture of building blocks. It may also be used as a medium for irrigation and aeration in agriculture.

RAMSET HAMMER SAFETY DEVICE

A safety device for their cartridge-fired hammers, preventing over-penetration of fasteners into insubstantial materials, has been developed by Ramset Fasteners, Ltd., 788a Finchley Road, London, N.W.11.

The device, known as Flite-Chek, takes the form of a vice-like attachment which comprises a pair of hardened steel jaws through which each fastener is fired. Any fastener which over-penetrates, or attempts to ricochet, is immediately caught and held by the attachment. Fitted into the barrel chamber is a small steel piston, called the Flite-Brake, which acts as an automatic brake on any over-driven fastener. The Flite-Chek tool can be used with any Ramset cartridge-fired hammer, the actual Flite-Brake only coming into operation on that occasion when an accident might occur.

MUIR-HILL 2WL LOADER WITH SHERMAN POWER DIGGER

THE Muir-Hill 2WL Mark II Loader is now available equipped with the Sherman hydraulic power digger or trencher, announce E. Boydell and Co., Ltd., Old Trafford, Manchester.

A hydraulic pump in the digger unit is driven by an integral hydraulic motor which in turn takes its power supply through a pair of flexible hoses with self sealing couplings from the hydraulic system of the loader. The provision of a four pin attachment enables this power digger to step off the loader under its own power within a few minutes and to step back into position equally quickly, whilst connected with the loader only through the flexible hoses.

2WL Mark II loader equipped with Sherman digger

Detachable ballast boxes for use when the loader is engaged in conventional duties are available as extras. The ballast box can be supplied equipped with lifting tackle and adjustable legs so that it can be carried from site to site in the loader bucket.

The Sherman equipment is now being manufactured in this country by Bray Construction, Ltd.

BOREHOLE PUMP RANGE INCREASED

The range of electric submersible borehole pumps which the Pulsometer Engineering Co., Ltd., are manufacturing has been increased to provide capacities of up to 50,000 gallons per hour at depths down to 500ft. below ground level.

These pumps, which are designed for boreholes not less than 6in. in diameter, are of the centrifugal type and can be single or multi-stage according to the application.

ARMSTRONG WHITWORTH OPEN AUSTRALIAN SUBSIDIARY

Mr. R. H. Philip, director and company secretary to Armstrong Whitworth (Metal Industries), Ltd., has flown to Australia to complete administrative arrangements following the opening of a subsidiary, Armstrong Whitworth (Australia) Pty., Ltd., at 31 Macquarie Place, Sydney, New South Wales.

Trade Section

NEW COMPANIES

The undermentioned particulars of new companies recently registered are taken from the daily register compiled by Jordan and Sons, Ltd., company registration agents, 116 Chancery Lane, London, W.C.2:—

L. and S. Builders (Exmouth), Ltd., 1 Halsdon Avenue, Exmouth, Devon. £100. Directors: Marie A. Lefevre, 26 Alexandra Terrace, Exmouth; and Robert S. Slade, "Barlsands," 1 Halsdon Avenue, Exmouth.

R. E. Randall and Son, Ltd., 27 High Street, High Wycombe, builders. £1,000. Directors: Richard E. Randall, David B. Randall and Mrs. Alice M. Randall, all of Downley Lodge, Downley, High Wycombe.

Brightways Construction Co., Ltd., 77 Lower Clapton Road, E.5. £100. Directors: Charles F. Stone and Edwin H. Stone, addresses not stated. Subscribers: Israel Semca, 77 Lower Clapton Road, E.5; and Leslie Cohen, 45c Grand Parade, N.4.

H. J. Smith and Sons, Ltd., builders. £5,000. Directors: Herbert J. Smith, Craig-y-Nos, Rhiwbina Hill, Rhiwbina, Glam.; Brian S. Smith, Holme View, Morningside Walk, Barry, Glam.; and Geoffrey G. Smith, 31 Pwll Evan Ddu, Coity, Bridgend.

Island Builders, Ltd. £100. Directors: To be appointed by the subscribers. Subscribers: Percy O. Ansell, 54 High View Gardens, Potters Bar, Middx.; and George A. Corderoy, 154 Darwin Buildings, Crail Row, S.E.17.

Kenworth Construction Co. (Hove), Ltd., 143 Montgomery Street, Hove, builders. £100. Directors: Lawrence Pacey, 143 Montgomery Street, Hove; and Oswald T. Pacey, 18 Grafton Street, Brighton.

W. G. Powell and Son, Ltd., builders. £16,000. Directors not named. Subscribers: Frederick W. Powell and Mrs. Joan S. Powell, Bracken Close, Buckshaft Road, Cinderford, Glos.; Arthur T. Pickthorne, 11 Abbots Road, Cinderford, Glos.

H. N. Clarke, Ltd., 21 Castlecroft Lane, Wolverhampton, reinforced concrete and structural steelwork design specialists. £100. Directors: Herbert N. Clarke, 21 Castlecroft Lane, Wolverhampton; and Mrs. Irene M. Clarke, 21 Castlecroft Lane, Wolverhampton.

A.S. Company (Shepperton), Ltd., builders. £3,000. Directors: J. W. Chappell, Mrs. Joseph E. Chappell and Mrs. Lily R. J. Chappell, all of 17 Horne Road, Shepperton, Middx.

Beardshaw and Co., Ltd., 10 King Street, Blackpool, builders. £4,000. Directors: Jack Beardshaw and Mrs. D. Beardshaw, 69 Cornwall Avenue, Blackpool.

Lovell Plant Hire, Ltd., Marsham Lane, Gerrards Cross, Bucks. £1,000. Directors: To be appointed by subscribers. Subscribers: Harry D. Swales and Clive J. G. Lewis, 45 Bloomsbury Square, W.C.1 (solicitors).

Quick Brothers (Bristol), Ltd., builders and contractors. £5,000. Directors: David G. Quick, Whites Hill House, Hambrook, Bristol; and Robert Quick, address not stated.

R. Hawkins and Co., Ltd., The Cedars, High Street, Cowley, Middx., plumbers, sanitary, heating and ventilating engineers, builders, etc. £1,200. Directors: Theodore Anderson, Acacia House, Harmondsworth, Middx.; Raymond Hawkins, 10 Moorfield Road, Cowley Peachey, near Uxbridge.

R. L. Ash and Sons, Ltd., 6a Lorne Street, Reading, builders. £5,000. Directors: Maurice L. Ash, 18 Parkside Road, Reading; Wallace G. Litten, 38 Oakley Road, Caversham, Reading; and Gweneth C. Ash.

Trevic Construction Co., Ltd., builders. £5,000. Directors: Victor E. W. Faraday, 426 Jenkin Road, Sheffield; and Keith T. Wheeldon, 303 Newman Road, Sheffield, 5.

Blount and Grainger, Ltd., builders. £3,000. Directors: John E. Blount, 81 Heage Road, Ripley, Derbys.; and Herbert Grainger, "Lustleigh," School House Hill, Heage, Ripley.

Lynwood Construction Co., Ltd., 20 Gardner Road, Tuebrook, Liverpool, 13, builders. £100. Directors: Harold Kershaw and Mrs. E. Kershaw, 20 Gardner Road, Tuebrook, Liverpool, 13.

Quick Brothers (Newport), Ltd., builders and contractors. £5,000. Directors: Robert Quick and David G. Quick. Subscribers: Robert Quick and Mrs. Mavis Quick, 15 Charlton Lane, Brentry, Bristol.

Cheltenham Ready Mixed Concrete, Ltd. £12,000. Directors: Not named. Subscribers: Graham C. Hayward, Glenside, Church Road, St. Marks, Cheltenham; and Lawrence H. Hemmings, "Au Tostal," Chargrave, Shurdington, Glos.

E. and S. Darby Construction Co., Ltd. £100. Directors: Ernest Darby (permanent managing director) and Sarah Darby, 22 Studland Road, Bournemouth. Solicitors: J. M. B. Turner and Co., Bournemouth.

H. Baylis and Son, Ltd., Langham House, Ombersley, near Droitwich, Worcs, builders. £3,000. Directors: Henry Baylis, Comhampton, near Stourport-on-Severn; Eric J. Baylis, Langham House, Ombersley; Frank Baylis, Sinton, Ombersley.

Wantz Plant Hire, Ltd., 358 Brentwood Road, Romford. £100. Directors: Peter F. Campkin, 211 Rydal Drive, Bexleyheath; Margaret R. M. Ronaldson, 7 Montem Road, New Malden; Thomas M. Lucas, 87 Gleeny Road, Barking.

Church Hill Plant Hire Co., Ltd., 26-7 Conduit Street, W.1. £1,000. Directors: Francis E. Davis and Eileen T. Davis, Pattenden, Gloucester Road, Burgess Hill.

J. Brooman, Ltd., 153 Tinshill Road, Cookridge, Leeds, builders. £2,000. Directors: John Brooman and Mrs. I. Brooman, 153 Tinshill Road, Cookridge, Leeds.

A Drott trimming a cargo of iron ore in the hold of an ore-carrying ship, at a South Wales dock. Despite the weight of this ore, which runs at about 150lb. to the cu. ft., the machine trimmed 240 tons in two hours. It is calculated that it would have taken nearly 70 man-hours to tub this ore

North Hill Builders, Ltd., Equity House, 76 Albion Street, Leeds. £100. Directors: Mrs. Elsie Spencer, 21 Henconner Avenue, Chapel Allerton, Leeds, 7; Mrs. Phyllis M. Fisch, 150 King Lane, Moortown, Leeds, 17.

V. G. Clements (Contractors), Ltd., builders. £1,000. Directors to be appointed by subscribers. Subscribers: Vernon G. Clements, 1 Wigton Gardens, Stanmore, Middx.; Edwin G. Gillett, 58 Chalkhill Road, Wembley Park, Middx.

W. and S. Forsum, Ltd., 96 Heath Road, Twickenham, builders. £500. Directors: Joseph N. S. Forget, 25 Gould Road, Twickenham; Walter L. Sumner, 134 London Road, Twickenham.

Corke and Co. (Builders), Ltd., 15 High Street, Tenterden, Kent. £2,000. Directors: Louis H. Davis, Shirkoak Poultry Farm, Woodchurch, Kent; Frederick S. Corke, 19 Shrubcote, Tenterden, Kent.

F. Williamson (Builders), Ltd., £5,000. Directors: Fred Williamson, 174 Dickens Lane, Poynton, Ches.; Thomas Fryer, Dial Mount, Andrew Lane, High Lane, Ches.

G. J. Bates and Co., Ltd., builders. £300. Directors: Geoffrey J. Bates and Cecilia Bates, Holly Bank, Station Road, Balsall, near Coventry.

H. F. Gibson and Sons, Ltd., 13 The Green, Clophill, Beds., builders. £600. Directors: Harold F. Gibson, 13 The Green, Clophill, Beds.; Herbert J. Gibson, 17 Parkside Gravenhurst, Beds.; Douglas F. Gibson, Kenneth F. Gibson and John W. Gibson.

M. Griffin, Ltd., District Bank Chambers, Hotel Street, Leicester, builders. £2,000. Director: Michael Griffin, 81 Gloucester Road, Chesterfield.

Anthony J. Morrey, Ltd., 43 Church Hill, Penn, Wolverhampton, builders. £5,000. Directors: Anthony J. Morrey, Little Manor, Church Hill, Penn, Wolverhampton; Helen P. Jennings, Silverbirch, Stourbridge Road, Wombourn.

M. M. McEvoy and Son, Ltd., 50 Claremont Grove, Wrose, Shipley, Yorks., builders. £100. Directors: Mrs. Margaret M. McEvoy, 50 Claremont Grove, Wrose, Shipley; James Higgins, 3 Hind Street, Bradford.

Nantwich Developments, Ltd., 25 Brazennose Street, Manchester, builders. £100. Director: Robert A. Duxbury, 20 Beeston Road, Sale, Ches.

Reed, Townsend and Co., Ltd., builders. £100. Directors: Stanley J. Reed, 27 Buckthorn Avenue, Stevenage; Bertie W. Moore, 65 Whomerley Road, Stevenage.

A. L. Peters and Sons, Ltd., highway and general contractors. £5,000. Directors: Arthur L. Peters, Burnside, Hertford Road, Hatfield, Herts.; Michael J. Peters, Marden Hill Lodge, Tewin, Herts. Esther A. Peters, Gerald Peters, Raymond L. Peters and David Peters.

Floods (Readymixed Concrete), Ltd., Rectors Lane, Pentre, Queensferry, Flints. £5,000. Directors: John R. Flood and Mrs. M. J. Flood, 22 Earles Crescent, Mancot Royal, Quensferry, Flints.

Steward and Son, Ltd., 36 High Street, Brentwood, builders. £100. Directors: John B. Steward, 7 Danes Way, Pilgrims Hatch, Brentwood; John R. Steward, 36 Quennell Way, Hutton.

W. H. and E. E. Whitley Concrete (Kinnerton), Ltd. £15,000. Directors: Edward E. Whitley, St. Johns, Grove Park, Wrexham; Jonah Whitley, 12 Salisbury Road, Wrexham; William H. Whitley and Phyllis Whitley.

Barda, Ltd., 87-91 Wardour Street, W.1, estate developers, builders, etc. £100. Director: David Barr, 92 Uphill Road, N.W.7.

Pittman Plant Hire Co., Ltd., 122 Palace Road, S.W.2. £1,000. Directors: Percival F. Pittman and Marjorie V. Pittman, 32 Salehurst Road, S.E.4; Florence G. Cocks, 220 Thornton Road, Carshalton.

Jakidig (Reigate), Ltd., 29 Lechford Road, Horley, Surrey, public works contractors. £1,000. Directors: John A. Husband, 29 Lechford Road, Horley, Surrey; Jack E. Phare, 103 Horley Road, Redhill, Surrey.

J. Finnis (Builders), Ltd. £1,000. Directors: Herbert Finnis and Ethel M. Finnis, 18 The Bayle, Folkestone.

Broomhead and Kirkland, Ltd., Horse Shoe Yard, Matlock, builders. £1,000. Directors: Raymond Broomhead, Ridgeway, Bagshaw Hill, Bakewell; Alfred E. Kirkland, Cavendish Road, Matlock.

C. H. Organ and Son (Builders and Decorators), Ltd. £100. Director: Charles H. Organ, 23 Claremont Gardens, Epsom Downs, Epsom, Surrey.

John Hopkins (Beaconsfield), Ltd., builders. £5,000. Directors: Kenneth V. Cavigan and Mrs. Ruth Cavigan, 9 Burkes Parade, Beaconsfield.

M. F. Hull and Co., Ltd., builders. £500. Directors: Maurice F. Hull and Eileen V. Hull, 190 Castle Hill Road, Totternhoe, near Dunstable.

Current Constructional Activities

PROJECTS • CONTRACTS • AWARDS

THIS editorial feature provides readers with a comprehensive news service covering forthcoming private and public construction work. Commencing on this page information is given concerning future projects followed by details of tenders being invited. In the third section will be found news of tenders recommended for acceptance, tenders accepted and contracts awarded. Attention is also drawn to the advertisements covering contracts and appointments appearing in the front part of the *Journal*.

BUILDING AND DECORATING
(See also Housing Schemes)

Aberdeen.—City Council propose a modernisation scheme at the Grammar School. Estimated cost £284,600. Housing Committee have approved a double-deck park for 210 cars in the Gallogate area.

Alton, Hants.—Wessex Regional Hospital Board recommended to appoint Galloway and Partners, 10 Portland Street, Southampton, as architects and J. B. Marks and Partners, 106 High Street, Guildford, as quantity surveyors, for adaptations to Lord Mayor Treloar Hospital to absorb Henry Gauvain Hospital.

Ampthill, Beds.—U.D.C. to erect a further block of 10 garages at Willow Way Gardens.

Andover, Hants.—Co. Planning Committee raise no objection to a proposal to build new headquarters for Maintenance Command at R.A.F. Station, for the Air Ministry.

Arbroath, Angus.—Dean of Guild Court have approved plans for the erection of a bank and offices at Brothock Bridge, for National Commercial Bank of Scotland, Ltd., 42 St. Andrews Square, Edinburgh, 2. Estimated cost £70,000.

Argyllshire.—Campbeltown and District Hospitals' Board of Management have approved sketch plans for Islay's new hospital.

Barrow-in-Furness, Lancs. — B.C. recommended to grant town planning consent, in principle for the erection of a club and community hall, for the Barrow Labour Party, on land at the junction of Albert Place and the Promenade, Walney.

Basingstoke, Hants.—Wessex Regional Hospital Board recommended to appoint J. B. Marks and Partners, 106 High Street, Guildford, as quantity surveyors, for improved sanitary facilities in staff houses at Park Prewitt Hospital; approve sketch plans for new chest clinic at Basingstoke Hospital.

Battersea. — South West Metropolitan Regional Hospital Board to proceed to the tender stage with plans for improvements to the psychiatric observation wards at St. John's Hospital. Estimated cost £18,900.

Belfast.—Clarence Engineering Co., Ltd., 24 Ormeau Avenue, propose to erect a new factory. Estimateed cost £25,000.

Bexley, Kent.—B.C. have approved in principle scheme for the construction of a covered swimming baths at Crock Log. Estimated cost £280,000.

Billingham-on-Tees, Dur.—J. W. Cameron and Co., Ltd., Lion Brewery, West Hartlepool, are planning the erection of licensed premises at Cowpen Bewlay. E. M. Lawson, Barras Buildings, Barras Bridge, Newcastle upon Tyne, is the architect.

Birtley, Dur.—The Artic Fuse and Electrical Manufacturing Co., Ltd., are to erect an office block in Windsor Road. No contracts have been arranged. Fennell and Baddiley, Bridge End Chambers, Chester-le-Street, are the architects.

Blackburn, Lancs.—B.C. recommended to approve plans for alterations and extensions at St. Matthew's C.E. School, Cambridge Street/Withers Street, for the School Managers, and alterations and extensions at Christ Church Hall, Mosley Street, for the Parochial Church Council.

B.C. recommended to apply for sanction to borrow £13,660 for conversion of former children's homes at Queen's Road into 34 bed-sitting units.

Blaydon, Dur. — St. Joseph's R.C. Church have purchased a site at Winlaton for the erection of a new church. D. Brown, 10 Lambton Road, Jesmond, Newcastle upon Tyne, is the architect. Work hoped to commence during the summer.

Bolton, Lancs.—B.C. recommended to apply for sanction to borrow £5,743 for erection of kitchen dining room and chair store at the St. Patrick's R.C. School; to approve sketch plans for the Smithills County Technical School; scheme for adaptation of Hind Street kitchen to provide additional accommodation for Tonge Fold County Secondary School. Estimated cost £6,185.

Bournemouth, Hants.—Wessex Regional Hospital Board recommended to appoint Reynolds, Tomlins and Dexter, Granville Chambers, Yelverton Road, as architects and P. S. Rathbone, 10 Stourwood Road, Southbourne, as quantity surveyor, for conversion of former laundry to nurses' dining room at The Royal Victoria Hospital; approve sketch plans for cobalt treatment room at the Royal Victoria Hospital and adaptations for maternity unit at the Firs Hospital.

Bradford, Yorks. — City Council recommended to instruct Scherrer and Hicks, architects, 19 Cavendish Square, London, W.1, to proceed with preparation of sketch plans of the South Bradford Secondary School to be erected at Lister Avenue.

City Council recommended to invite Vic Hallam, Ltd., Nottingham, to prepare plans, etc., for proposed laboratories and classrooms at Rosemount for use by Technical College. Estimated cost £3,300.

City Architect to be instructed to prepare scheme for adapting 56 Manchester Road, for library purposes.

Buxton, Derbys.—B.C. recommended to approve plans for the erection of public conveniences at Water Street and Burlow Road and reconstruction of conveniences at Ashwood Park, Bakewell Road.

Carlisle, Cumb.—City Council recommendd to apply to the M.E. for approval to additional workshop and laboratory space at Technical College. Estimated cost £5,785.

City Council to approve in principle and appoint W. E. Edwards and Partners, 5-6 Claremont Buildings, Newcastle upon Tyne, architects for development of land between English Street and Lowther Street; to approve plans for the eerction of 19 lock-up garages on land between London Road, St. Nicholas Street and Woodrouffe Terrace, for Martin Bros. (Carlisle), Ltd., Lyndhurst Park Road, Harker; erection of warehouses, Burgh Road Industrial Estate, for (Wholesale Chemists), Ltd., Lancaster Street, Hodgson and Tritton, architects, 18 Bank Street.

Carrickblacker, Armagh.—J. Tomlinson, 4 Waring Street, Belfast, is the architect for the erection of an advance factory of 50,000 sq. ft., for Ministry of Commerce. Ferris, Craig and Moore, 41 University Road, Belfast, are the quantity surveyors and McAuslan, Abbott and Partners, 16 Bedford Street, Belfast, the consulting engineers.

Chelsea.—A contract is expected to be placed before June for erection of a four-storey block of flats and a supermarket at King's Road. Stone, Toms and Partners, 28 South Audley Street, London, W.1, are the architects; Ward and Daly, the consulting engineers, and Pritchard, Williams and Hunt, London, E.C.4, the quantity surveyors. Estimated cost £100,000.

Cheltenham, Glos.—B.C. recommended to approve, subject to conditions, plans for the erection of a public house at Benhall Avenue, for the Cheltenham and Hereford Breweries, Ltd., 265 High Street; extension of 3,750 sq. ft. to industrial premises at Tennyson Road, for Spirax-Sarco, Ltd., Charlton House, 14 Cirencester Road.

Chester-le-Street, Dur.—A scheme is being considered for converting the Savoy Cinema into shops. H. O. Ludor, 79 Regency Street, London, S.W.1, is the architect.

Chichester, Sussex.—City Council recommended to approve plans for a grandstand, for Chichester United Football Club, Ltd., 25 Castleman Road, Chichester.

Chichester, Sussex.—South West Metropolitan Regional Hospital Board recommended to approve the appointment of Rider Hunt and Partners, Bridge House, Queen Victoria Street, London, S.W.1, as quantity surveyors for the erection of a central sterilising department at St. Richard's Hospital. Estimated cost £21,800.

Chippenham, Wilts.—B.C. recommended to invite tenders from selected contractors for external painting of Westcroft flats and 324 houses in the Downing Street and London Road areas, Oaklands.

Christchurch, Hants.—Wessex Regional Hospital Board recommended to approve scheme for offices for the geriatric department at Christchurch Hospital. Estimated cost £2,000.

Colchester, Essex. — North-East Metropolitan Regional Hospital Board are to prepare plans for a new Essex County Hospital, Colchester, incorporating the present buildings where possible and for alterations, etc., at the Maternity Hospital.

Cork, Eire.—The Sacred Heart Fathers, Sacred Heart College, Dyke House, Wellington Bridge, propose to erect a building at Carrignavar for 150 students. Estimated cost £200,000.

Crawley, Sussex.—U.D.C. have approved in principle sketch plans and layout, and appointed Sir John Brown and A. E. Henson and Partners, 117 Sloane Street, London, S.W.1, as architects for the proposed new council offices. Estimated cost £276,000.

Dalkeith, Midlothian.—Dean of Guild Court have approved the following: conversion of Eskbank carpet factory, for Henry Widnell and Stewart, Ltd., estimated cost £5,000; erection of a lounge at Lothian Arms Hotel, 16-18 Edinburgh Road, £4,000.

Darlington, Dur.—A scheme is being considered for £1,500 extension to the Church of the Salutation, Salutation Road.

Dewsbury, Yorks.—Borough Architect to be requested to prepare plans for the erection of a new building for use as a community centre on the site of the Chickenley Lane Junior School.

Douglas, I. of M. — B.C. have approved a scheme for reconstruction of the butchers' market. Estimated cost £9,000.

Douglas, I. of M.—Harbour Board to apply for sanction to borrow £400,000 for demolition of the Arcade and construction of new terminal buildings at Victoria Pier.

Dover, Kent.—M.W. are to erect a post office engineering depot at Granville Street during this year.

Downham, Norfolk.—R.D.C. to submit to Ministry for approval scheme for improvements to 42 properties at Ten Mile Bank, Hilgay, Denver and Wimbotsham; invite tenders from selected contractors for the painting of 166 houses and bungalows.

Dumfriesshire.—E.C. have approved the provision of Comprehensive Secondary Schools at Sanquhar and Kirkconnel. Estimated cost £360,000.

Durham.—It is expected that tenders will be obtained within about two months for a proposed R.C. junior school at Gilesgate, Durham City. A. J. Rossi, 88 Medomsley Road, Consett, is the architect. George T. Brown and Son, 14 Grange Terrace, Stockton Road, Sunderland, are the architects for garage, showroom, etc., at Gilesgate Moor, Belmont, for Dixon Motors (Durham), Ltd.

Durham University are to erect a new arts department at New Elvet. No contracts have been arranged. Marshall Sisson, Farm Hall, Godmanchester, Huntingdon, is the architect.

Durham Territorial Army Association are to erect stores building at Elvet. An additional storey will be built on the premises to serve as headquarters for the Durham Light Infantry.

Easington, Dur.—Alterations are proposed to the Horden Constitutional Club to plans by J. F. Johnson, Meadowbank Cottage, Castle Eden.

East Barnet, Herts. — Middx. C.C. have authorised U.D.C. to erect a Civil Defence Training Centre, subject to approval of the Home Office. Estimated cost £5,515.

Eastbourne, Sussex.—B.C. recommended to prepare detailed plans and estimates for the construction of a home for the ambulant aged and elderly mentally infirm on a site at Seaside; submit to M.E. for approval in principle, plans for alterations to Meads C. of E. School, for the school managers. Estimated cost £14,750.

B.C. recommended to approve, subject to conditions, plans for the erection of two chimneys, for the Scotch Bakery (Sussex), Ltd., at their new premises on the Brampton Road trading estate.

East Suffolk. — C.C. have approved proposals for extensions to the Connty Hall, Ipswich. Estimated cost £20,000.

Edinburgh.—Southern Hospitals Board of Management, 21 Hill Street, propose to build a new isolation unit at Elsie Inglis Hospital. Estimated cost £25,000.

Edmonton, Middx.—C.C. recommended to approve, subject to M.E. approval, scheme for

extension and adaptation of Edmonton County School. Estimated cost £110,420.

Emsworth, Hants.—Wessex Regional Hospital Board recommended to approve scheme for extensions to kitchens at Emsworth Hospital. Estimated cost £1,250.

Epping, Essex.—C.C. have approved scheme for the erection of a children's home at Forest Side, Coppersale. Estimated cost £9,000.

Epsom, Surrey.—South West Metropolitan Regional Hospital Board recommended to approve the invitation of tenders for adaptations to school accommodation to provide seven male nurses' bedrooms, etc., at St. Ebba's Hospital. Estimated cost £3,200.

Fareham, Hants.—Wessex Regional Hospital Board recommended to approve sketch plans for new entrance to south block at Knowle Hospital.

Friern Barnet, Middx.—C.C. recommended to approve erection of a branch library at junction of Sutton Road and Colney Hatch Lane. Estimated cost £27,580.

Gloucester.—City Council have approved in principle the proposed layout of a civic centre and authorised the City Architect to proceed with the first stage of the scheme.

Grantham, Lincs.—B.C. recommended to approve scheme for new toilets at Wyndham Park Baths.

Great Yarmouth, Norfolk.—B.C. recommended to apply for sanction to borrow £4,500 for improvements to 39 houses at Mangrove estate.

Harrow, Middx.—C.C. recommended to approve, subject to M.E. approval, second phase of extensions to Whitefriars Secondary School. Estimated cost £80,221.

Haslingden, Lancs.—B.C. recommended to apply for sanction to borrow £21,700 for extension and alteration to existing Municipal Offices.

Hayes and Harlington, Middx.—C.C. recommended, to approve, subject to M.E. approval, first phase extension of Townfield Secondary Boys' and Girls' Schools. Estimated cost £102,652.

Heston and Isleworth, Middx.—B.C. propose to erect a site office and 10 garages on the Cranford Lane housing estate. Estimated cost £4,600.

Hornsey, Middx.—C.C. recommended to approve scheme for extension of library at the College of Art. Estimated cost £1,730.

Hoylake, Ches.—Birkenhead Brewery Co., Ltd., 73 Oxton Road, Birkenhead, propose the erection of an hotel, The Blue Anchor, at Market Street. Plans by Fergus H. Frost, company architect. A. E. Thornton-Firkin and Partners, 20 Chapel Street, Liverpool, 3, are the quantity surveyors. Estimated cost £40,000.

Ipswich, Suffolk.—B.C. have approved scheme for the provision of huts at Castle Hill Junior School. Estimated cost £3,000.

J. Owen Bond and Son, St. Faith's House, Mountergate, Norwich, are the architects, for the development of a site at Princes Street, for Mann Egerton and Co., Ltd. Estimated cost £100,000.

Kesteven.—E.C. propose laboratory conversion at Grantham King's School, adaptations and extensions to Nocton School, a new laboratory and two classrooms at Sleaford Girls' High School. Estimated cost £1,335, £18,200 and £11,205, respectively.

Kesteven.—E.C. recommended to approve improvements to the general science and biology laboratories of Kesteven Training College, Stoke Rochford, estimated cost £6,500; plan for extension of Ingoldsby County Primary School into a two-class school, £10,000; acquire land at Harlaxton Road, Grantham, for a secondary modern school.

Kidderminster, Worcs.—W. E. Bodenham, 74 Worcester Street, is the architect, for the erection of factory and office accommodation, for Henry Beakbane (Fortox), Ltd. Estimated cost £10,000.

Leeds.—Acting City Architect to be asked to prepare sketch plans and an estimate for provision of additional dormitory accommodation at the Collective Training Centre at Eastern Fire Station.

City Council recommended to authorise expenditure of £2,000 for repairs to concrete surrounds at Roundhay Open-air Bathing Pool; to proceed with the erection of new central baths at New York Road for which provision is included for consideration in the forecast of capital expenditure for 1960-61; to apply for sanction to borrow £30,810 for building, site works and planting in respect of that portion of the proposed Burmantofts Health Centre accommodating the Local Authority Services; to authorise expenditure of £1,763 for conversion of conservatory into sun lounge and alterations to kitchen at Gardenhurst.

Lindsey.—E.C. are preparing plans for the erection of a youth centre. Estimated cost £10,000.

Londonderry.—A. T. Marshall, 1 Harbour Square, Londonderry, is the architect and F. H. Wright and Partners, 79 Botanic Avenue, Belfast, the quantity surveyors, for a new school to be erected at Springtown, for Board of Governors, Foyle College. Estimated cost £150,000.

Lyme Regis, Dorset.—B.C. recommended to prepare plans and invite tenders for the restoration of the West Wing of the Museum Building.

Manchester.—City Council to proceed with schemes for old people's hostels at Cornishway and Scout Drive, Wythenshawe.

City Council recommended to apply for sanction to borrow £66,170 for old people's home at Heyhead View, Wythenshawe; £63,650 for erection of single-storey standard factories, Roundthorn industrial area, Wythenshawe; £9,967 for erection of classrooms on roof of Manchester Training College; £54,580 for second instalment of King David (Jews) Secondary School, Crumpsall; and £26,250 for erection of factory at Wythenshawe.

Mansfield, Notts.—B.C. recommended to approve second phase of development at central waterworks. Estimated cost £8,400.

Melton Mowbray, Leics.—Sheffield Regional Hospital Board Planning Committee have approved sketch drawings for maternity unit at St. Mary's Hospital.

Middlesbrough, Yorks.—Negotiations are in hand for redevelopment scheme in the town's shopping centre in the Dundas Street area. The promoters are the Metropolitan Railway Surplus Land Co., Ltd., London, whose agents at Middlesbrough are Sanderson, Townend and Gilbert, Borough Road West. A large amount of property to be acquired will be demolished and new modern shops and offices erected on the site. It is expected that 200 extra yards of shopping frontage will be provided. Evans, Cartwright and Woollatt, 4 Clarendon Street, Nottingham, are the architects. Plans for the scheme have still to be considered by the local authority, but the Council is stated to support the project in principle.

The Berwick Hills branch of the British Legion are planning the erection of new club premises; Lionweld, Ltd., are to purchase 6,000 sq. yd. of land in the Marsh Road area for proposed industrial purposes.

Montrose, Angus.—B.C. propose to build an indoor swimming pool. Estimated cost £100,00.

Murton, Dur.—New premises are proposed for the Dalton-le-Dale Social Club. J. M. Angus, 3 Gallowgate, Newcastle upon Tyne, is the architect.

Newcastle upon Tyne.—Plans have been prepared by Marshall and Tweedy, 36 Blackett Street, for alterations to the Cottage Restaurant, Northumberland Road, for Carricks, Ltd.; Green, Lloyd and Son, Pickering Place, St. James' Street, London, S.W.1, are the architects for shop and flats in Northumberland Street for Barclays Bank, Ltd.; T. B. Pearson and Son (Engineers), Ltd., Wincomblee Road, are to erect factory, and have prepared their own plans.

Newport, I. of W.—Wessex Regional Hospital Board recommended to approve sketch plans for nurse training accommodation at Whitecroft Hospital.

Norfolk.—Standing Joint Committee propose subject to Home Office approval, the commencement of work during August on new divisional police headquarters at Attleborough, September on a sergeant's station at Aylsham, December on a sergeant s station at Wells-next-the-Sea and in March, 1961, on an inspector's station at Loddon.

Norwich.—City Council recommended to approve the provision of additional lavatories at Catton Grove Junior and Infants' School and repairs and adaptations to premises at Hall Road. Estimated cost £6,000 and £2,000 respectively.

Nottingham.—Sheffield Regional Hospital Board Planning Committee have approved sketch plans for provision of sanitary block for Ashwell Yard at Sherwood Hospital.

Nottingham.—City Council recommended to apply for sanction to borrow £192,804 for the erection of new premises for the Guildford Secondary School for Girls at Bar Lane.

Oswestry, Salop.—R.D.C. to apply for sanction to borrow £1,650 for the erection of 10 garages at Weston Rhyn.

Oxford.—Drawings and bills of quantities are being prepared for the erection of an extension to Queen Elizabeth House, St. Giles, for the Trustees. R. E. Enthoven, 4 Raymond Buildings, Grays Inn, London, W.C.1, is the architect for the scheme, Wilson, Colbeck and Partners, 86 Old Brompton Road, London, S.W.7, the quantity surveyors, and R. W. Steele and Partners, 128 Finchley Road, London, N.W.3, are the heating consultants.

Peterborough.—Co. Planning Committee have approved plans for alterations and extensions at St. Mark's Junior School, Gladstone Street, for the Joint Education Board; subject to cond.tions, the erection of a church hall ancillary accommodation adjoining the London Road Methodist Church, for the Trustees.

Peterborough.—Joint Education Board have approved final plans for extension and improvement of St. Mark's Junior Boys' School.

Douglas Stephen and Partners, 30 Wimpole Street, London, W.1, are the architects for the redevelopment of the Midgate shopping centre, for Oddenino's Property and Investment Co., Ltd. Scheme provides for a large departmental store, supermarket, 17 shops with flats above, block of offices, etc. Estimated cost £800,000.

Peterlee, Dur.—J. Nimmo and Sons, Castle Eden, have been granted permission to erect a public-house in the town centre of Peterlee. Plans are by the brewery company's own architect, J. F. Johnson

Poole, Dorset.—Ministry have authorised the Wessex Regional Hospital Board to proceed with the detailed preparation of the rebuilding of Poole General Hospital, stage II.

Portchester, Hants.—Home Office have approved erection of a fire station, for the County Fire Services Committee. Estimated cost £10,000.

Portsmouth.—Wessex Regional Hospital Board recommended to appoint T. K. Makins, 4 Landport Terrace, and L. Chandler. The Shrubbery, Grove Road, Southsea, respectively as architects, for connections to boiler house at St. Marys Hospital and construction of a hospital shop at St. James Hospital, approve scheme for improvements to the operating theatres at Queen Alexandra Hospital. Estimated cost £2,000.

Portsmouth.—Piers, Beach and Publicity Committee have approved scheme for a 200ft. long shelter on Southsea promenade between South Parade Pier and Southsea Castle. Estimated cost £3,800.

Potters Bar, Middx.—C.C. recommended to approve, subject to M.E. approval, scheme for extension of Oakmere Primary School. Estimated cost £17,070.

Radcliffe, Lancs.—Town Planning permission granted to Donald Macpherson and Co., Ltd., Warth, for erection of sports pavilion. Estimated cost £8,000.

Reading, Berks.—B.C. recommended to appoint L. W. Chopping, 17 Market Place, and Mager and Greenaway, 52 Castle Street, respectively, as quantity surveyors for alterations at George Palmer Secondary School and the new Tilehurst Primary School and laboratories at Ashmead Secondary School.

Redhill, Surrey.—South West Metropolitan Regional Hospital Board recommended to approve the erection of two staff hostels at Redhill Hospital.

Renfrewshire.—C.C. recommended to approve a five-year programme of school building, costing about £8m., including extension of Paisley Trade School, estimated cost £150,000; replacement of Johnstone High School, £450,000; replacement of Renfrew High School, £400,000; a new senior secondary school at Crookfur, £450,000; John Neilston Institution, Paisley, to be replaced or extended £400,000; the new Greenock High School to be built on the outskirts of the town, £450,000; the New Greenock Academy, £380,000, and Gourock High School will be replaced, £225,000.

Rochdale, Lancs.—B.C. recommended to appoint William O'L. Markham and Partners, 18 Lloyd Street, Manchester, quantity surveyors for extensions to transport depot.

Rotherham, Yorks.—M.E. to make a grant of £1,702 towards the cost of a memorial hall to be built in the village of Catcliffe, for the Catcliffe Parish Council. Total cost £5,107.

Rushden, Northants.—H. W. Chapman, Oliver Cromwell Road, have submitted to U.D.C. for approval plans for extension to factory, Oak Street.

Rugby, War.—Co. E.C. recommended to approve adaptation of buildings for use by the East Warwickshire College of Further Education. Estimated cost £57,250.

Ryde, I. of W.—B.C. to apply for sanction to borrow £2,420 for construction of new public conveniences at Binstead and Puckpool Park.

St. Andrews, Fifes.—Sir William Holford and Partners, 2a Angel Court, London, E.C.2, are the planning consultants for the proposed new departments of physics, mathematics, chemistry and geology on the North Haugh, for The University Court. Estimated cost £2m.

Scarborough, Yorks.—J. H. Napper and Partners, 133 Osborne Road, Newcastle upon Tyne, have been appointed architects for Girls' Modern School for North Riding E.C.

Scarborough, Yorks.—B.C. recommended to apply for sanction to borrow £17,150 for replacement of precast concrete eaves gutters on Corporation houses.

B.C. recommended to approve in principle plans submitted by W. S. Gray, architect, 31 Grosvenor Road, for erection of an assembly hall on the St. Thomas Street frontage of the Convent of the Ladies of Mary.

Scarborough, Yorks.—Borough Engineer has prepared a plan for extending the Grand Hall at the Spa; E. T. W. Dennis and Sons, Ltd., are to extend their printing works in Melrose Street; North Riding C.C. are to extend the Filey Road training college; also seeking land for extending the George Pindar Modern School; The Methodist Homes for the Aged have been offered a site on the Northstead estate for a home for old people.

Sheffield. — Plans by M. W. Ofield, staff architect, for erection of the Foxhill public house at junction of Foxhill Road and Lyminster Road, Wadsley Bridge, for Tennant Brothers, Ltd., Bridge Street. Estimated cost £25,000.

Sheffield.—City Council recommended to appoint Brydon and Woodford, 33 Catherine Place, London, S.W.1, quantity surveyors. Wheatley, Bryon and Partners, Ltd., 73 High Holborn, London, W.C.1, structural engineers, and Hoar, Lea and Partners, 52 Green Street, London, W.1, electrical and heating engineers, for stage 2 of the Myers Grove Secondary School.

Shildon, Dur.—U.D.C. has received an inquiry from Pomeroy Developments, Ltd., London, who are planning converting Church Street Methodist Church into shops and offices (or flats).

Shipley, Yorks. — Moore, Johnston, Ltd., 154-6 Sunbridge Road, Bradford, 1, are to erect a new factory.

Shrewsbury, Salop.—B.C. preparing plans for an abattoir as the third and final phase of the new livestock market at Narlescott.

Shrewsbury, Salop.—F. W. Woolworth and Co., Ltd., have purchased the Raven Hotel, Castle Street, and plan the demolition of the premises and the redevelopment of the site as a new store.

Southampton.—Wessex Regional Hospital Board recommended to approve sketch plans for upgrading mental wards at Moorgreen Hospital.

Southport, Lancs.—B.C. recommended to reinstate in the 1960-61 programme proposal for provision of a new toilet block at Crossens C.E. Primary School. Estimated cost £2,800.

South Shields, Dur.—Kitching and Co., 21 Albert Road, Middlesbrough, are the architects for the erection of shops and offices under the central area redevelopment scheme.

Staffordshire. — E.C. recommended to submit to M.E. for approval schemes for the erection of replacement premises for Basford Hall Special School, and alterations and additions to Westwood Hall Girls' High School. Estimated cost £70,000 and £85,000, respectively.

Stockton-on-Tees, Dur. — Messrs. Benson, Yarm Lane, are to erect showroom, offices and workshops in Brunswick Street. The architect is J. G. L. Poulson, 54 Albert Road, Middlesbrough.

Stockton-on-Tees, Dur. — Shop extensions are proposed in Bishopton Lane for A. Vickers. F. G. Dixon, Albert Road, Middlesbrough, is the architect.

E.C. to spend £12,000 on the erection of a hall to complete the East Hartburn Primary School.

J. S. Houghton, 57 High Street, is the architect for a church in Darlington Lane.

Stockport, Ches.—B.C. recommended to prepare detailed drawings, etc., for the erection of an ambulance depot (incorporating 16 garage bays and two repair bays) at Heaton Lane and a combined clinic at North Reddish.

Stoke-on-Trent, Staffs. — City Council have approved scheme for the first phase of a new building for the catering department at the North Staffordshire Technical College. Estimated cost £35,750.

Stokesley, Yorks.—R.D.C. approved plans for filling station and showroom at Dixons Bank, Marton, for R. C. McInnes, Nunthorpe, Middlesbrough.

Sudbury, Suffolk.—East Anglian Regional Hospital Board recommended to approve the appointment of Sandon and Harding, 14 Lower Brook Street, Ipswich, as architects, for new mortuary and post mortem room at Walnuttree Hospital.

Sunbury-on-Thames, Middx.—C.C. recommended to approve, subject to M.E. approval, first phase of the erection of Manor Lane Primary School. Estimated cost £80,955.

Sunderland, Dur.—S. W. Milburn and Partners, 9 Esplanade, are the architects for additions to offices at the Crown Works of Steel and Co., Ltd.

J. A. Joblin and Co., Ltd., Wear Glass Works, are planning extensions on 14 acres of land.

Sunderland, Dur.—Newrick and Blackbell, 58 John Street, have prepared plans for factory extensions for Ericcson Telephones, Ltd.; Alexander Rose, Ltd., Leeds, are considering the erection of a three-storey workshop on the site of the Boilermakers' Hall, West Sunniside; plans approved for the erection of new premises for the Farringdon Social Club and Institute. E. G. Crofts, 49, Grange Road, Darlington, is the architect; British Home Stores, Ltd., to carry out alterations and additions to their stores in High Street West. Braithwaite and Jackman, 2 Saville Place, Leeds, are the architects.

Sutton Coldfield, War.—Co. E.C. to purchase sites for the erection of the Sutton Coldfield North High School.

Swansea.—B.C. have granted planning approval for the conversion of the old Empire Theatre into a supermarket, for Lynton Holdings, Ltd., North Audley Street, London, W.1.

Thornaby-on-Tees, Yorks. — Coultas and Shaw, 33 Stephenson Street, are to convert cinema in Westbury Street into shops and flats; A. Bainbridge, Ltd., North Yorkshire Ironworks, are to erect offices and mess room in Hope Street; Head Wrightson and Co., Ltd., Teesdale Ironworks, are to erect office block in Trafalgar Street.

Tottenham, Middx.—B.C. recommended to approve, and submit to Ministry for approval, outline scheme for the extension of the town hall.

Ulverston, Lancs.—Co. E.C. have included in their 1960-61 programme provision for a kitchen and dining room at Hawkshead County School, and kitchen at Lowick C.E. School.

Uxbridge, Middx.—C.C. recommended to approve, subject to Ministry approval, scheme for erection of a health clinic at Park Road, Harefield, and a home for old people at Knightscote Farm, Breakspear Road, Harefield. Estimated cost £5,800 and £69,760, respectively.

Waddon, Surrey. — Tomei and Maxwell, 24 Dean Street, London, W.1, are the architects for the erection of St. Dominic's R.C. Church at Violet Lane.

Wallsend, Northumb. — Denneys Motors, High Street West, are to erect a petrol service station.

Borough Engineer to prepare plans for a roads and building depot at New Winning.

Walsall, Staffs.—Ministry have granted outline planning permission for use of land at Gorway-Broadway for the erection of two training colleges for teachers, for B.C.

Warsop, Notts.—U.D.C. have approved second phase of the National Coal Board's proposed improvement scheme at Warsop Vale, where 66 houses are to be provided with bathrooms, sculleries, coal stores and toilets, with modern sitting room firegrates and electric wiring. Estimated cost £30,706.

Wellingborough, Northants.—Ministry have approved the use of land at London Road for an industrial estate, for U.D.C.

Wells-next-the-Sea, Norfolk.—U.D.C. have approved scheme for improvements to (a) 54 pre-war houses at Gales Road, Park Road, Theatre Road and Mill Road, (b) eight at Bases Lane, (c) 30 at Northfield Crescent, (a) 1-20 Northfield Avenue, (e) 21-28 Northfield Avenue, and (f) 32 at Westfield Avenue and Mill Road. Estimated costs (a) £7,780, (b) £1,160, (c) £4,620, (d) £6,550, (e) £4,070, (f) £12,360.

West Drayton, Middx.—C.C. recommended to approve erection of a branch library at Station Road. Estimated cost £16,405.

Wetherby, Yorks. — West Riding Co. E.C. propose to establish a new county secondary school at Moorlands.

Weymouth, Dorset.—Wessex Regional Hospital Board recommended to approve the provision of a premature babies unit at Portwey Hospital. Estimated cost £4,000.

Weymouth, Dorset.—B.C. recommended to proceed with stages II and III of the development scheme and prepare plans for the provision of a two-tier car park near Weymouth Pavilion; apply for sanction to borrow £1,140 for the provision of second court facilities at the Guildhall.

Whitley Bay, Northumb.—Consideration to be given to a scheme for the development of the Y.M.C.A. centre at South Parade. S. W. Milburn and Partners, 9 Esplanade, Sunderland, are the architects. Estimated cost £30,000.

Wigan, Lancs.—Wigan Society for Mentally Handicapped Children to erect new community centre in Frank Street.

Willesden, Middx.—B.C. recommended to submit to Ministry for approval, schemes for the repair and adaptation of (a) 58 Cambridge Road, (b) 2 and (c) 52 Chichester Road, (d) 45 Oxford Road, (e) 10, (f) 13 and (g) 14 Princess Road, (h) 25 Cambridge Gardens. Estimated cost (a) £729, (b) £1,108, (c) £1,230, (d) £801, (e) £958, (f) £851, (g) £999, (h) £1,262; preparing working drawings for extension of Central Library.

B.C. recommended to submit to C.C. for approval, scheme for erection of factory with first floor offices at Humber Road, for S. Smith and Sons (England), Ltd., Cricklewood Works, London, N.W.2.

Wiltshire.—E.C. propose the erection of classrooms and cloakroom at Tidworth Down Secondary Modern School. Estimated cost £1,600.

Windermere, Westmor.—Walker Carter and Walker, Institute Buildings, Windermere, are the architects and Reginald Holmes, Blenheim Terrace, Leeds, the quantity surveyor for erection of new R.C. Church at Lake Road. Work to commence later this year.

Winchester, Hants.—Wessex Regional Hospital Board recommended to approve scheme for improvements to the nurse training school at Royal Hampshire County Hospital. Estimated cost £2,000.

Woking, Surrey.—South West Metropolitan Regional Hospital Board recommended to appoint Kenneth G. Barber, 945 Brighton Road, Purley, as quantity surveyor for the modernisation of the main kitchen at Brookwood Hospital. Estimated cost £44,000.

Wolverhampton, Staffs.—B.C. recommended to appoint, subject to M.E. approval, Lavender, Twentyman and Percy, 35 Waterloo Road, as architects, for the erection of a Technical Teachers' Training College at Chapel Ash.

Woodhouse, Leics.—Parish Council have approved scheme for the modernisation and enlargement of the village hall. S. Penn Smith, Waterloo House, 2 Hastings Street, Leicester, is the architect. Estimated cost £5,000.

Worcester.—City Council recommended to appoint Healey and Baker, 29 St. George Street, Hanover Square, London, W.1, in association with Shingler and Risdon, architects, 47 Bedford Row, London, W.C.1, as consultants in connection with the redevelopment of the Lich Street area.

DEMOLITION

Norwich.—City Council recommended to approve the demolition of the disused building at junction of Riverside Road and Bishopgate and the old fire station in Pottergate. Estimated cost £3,000 and £4,500 respectively.

Folkestone, Kent. — B.C. recommended to proceed with the demolition of 116 Dover Road.

Rushden, Northants.—U.D.C. have approved the demolition of the entrance lodge at Rushden Hall grounds.

ELECTRICAL

Bournemouth, Hants. — Wessex Regional Hospital Board recommended to approve sketch plans for the installation of a lift in H block at the Royal Victoria Hospital, Boscombe.

Durham.—Co. E.C. to rewire Birtley Ravensworth Terrace County School; propose to renew the electrical installation at Chilton Infants' School, £500; Stanhope County School, £600; Bishop Auckland Barrington C.E. School, £1,150; Felling Bill Quay Modern School, £2,500; and Hunwick Modern School, £3,000.

Norwich.—City Council recommended to approve scheme for improvements to the lighting in certain rooms and offices in the City Hall and the installation of a power operated passenger lift at The Lawns. Estimated cost £1,500 and £925 respectively.

Plymouth.—City Council recommended to proceed with scheme for the installation of a document lift at the civic buildings. Estimated cost £2,780.

Wales.—British Railways (Western Region) propose a three-year scheme for the modernisation of the signal system on the Central Wales line, which runs from Swansea Victoria to Craven Arms via Llandilo, Llandovery and Llandrindod Wells. Estimated cost £676,000.

Wellingborough, Northants. — M.T. have approved installation of traffic lights at junction of Broadway and London Road, for U.D.C.

FENCING

Hastings, Sussex. — B.C. recommended to proceed with the repair of a fence at East Hill Lift to Ecclesbourne Glen. Estimated cost £500.

GAS AND WATER SUPPLY

Atcham, Salop.—R.D.C. propose the following water supply schemes: Picklescott water supply, extensions of mains to supply Pontesford Hill; interconnecting mains between Pinhill and Haughmond Hill reservoirs to supply Astley and Uffington; new supply for Alberbury, Westbury, and Wollerton parishes, and the third phase of the East Atcham water scheme.

Barry, Glam.—B.C. recommended to apply for sanction to borrow £18,750 for the provision of a new by-pass main and booster station.

Bath, Som. — City Council have approved scheme for the provision of a new water source from the River Avon, at Bathampton Meadows to supply the city. Estimated cost £76,900.

Blyth, Suffolk. — Co. Water Supplies and Sewerage Committee have approved, for grant aid, water supply scheme for the nuclear power station at Sizewell, for R.D.C. Estimated cost £174,000.

Carlisle, Cumb.—City Council recommended to apply for sanction to borrow £2,500 for laying 4in. and 6in. water mains on the Willow Holme trading estate.

Chichester, Sussex. — City Council recommended to prepare documents and invite tenders in due course for the construction of trial boreholes for developing a new source of supply at the junction of Chilgrove and Lavant valleys.

Chipping Norton, Oxon. — R.D.C. have approved the provision and laying of 900yd. of cast-iron pipes to supply water for Salford. Estimated cost £2,000.

Depwade, Norfolk.—C.C. recommended to approve, in principle, for grant aid, R.D.C.'s scheme for laying a 6in. water main from Harleston to Rushall. Estimated cost £19,000.

Durham.—County Water Board are to erect reservoir at Marley Hill to plans by A. C. Wildsmith, chief engineer. Estimated cost £9,000.

Erpingham, Norfolk.—C.C. recommended to approve, in principle, for grant aid, R.D.C.'s schemes for extensions to serve properties at Glandford, Lower Bodham and East Beckham. Estimated cost £12,935.

Glamorgan.—Neath and Port Talbot Joint Water Committee recommended to approve, subject to conditions, scheme for abstraction of water from the River Neath, to provide a domestic water supply. Estimated cost £220,000.

Grange, Lancs.—U.D.C. to apply for sanction to borrow £7,800 for renewal of filtration plant, sea wall fencing and ancillary works.

Leek, Staffs.—U.D.C. to apply for sanction to borrow £10,000 for the laying of a 10in. water main from Mount Road to the junction of Stockwell Street and the Market Place.

Manchester.—City Council recommended to apply for sanction to borrow £51,400 for site preparation and excavation work for covered reservoir at Dunham Park, Bowden.

Marshland, Norfolk.—C.C. recommended to approve, in principle, for grant aid, R.D.C.'s third post-war water extension scheme. Estimated cost £11,835.

Newton Abbot, Devon.—R.D.C. to proceed with amended regional water supply scheme (to include Bickington). Estimated cost £76,000.

North Walsham, Norfolk. — U.D.C. to submit to Ministry for approval scheme to augment district water supply and apply for sanction to borrow £9,000 for the project.

Ossett, Yorks.—B.C. recommended to apply for sanction to borrow £900 and £3,575, respectively, for replacement of booster pump at Gawthorpe and renewal of 6in. steel water main, Queen's Drive.

Portsmouth.—City Council recommended to apply for sanction to borrow £6,000 for augmented pumping scheme for Great Salterns pumping station.

Richmond, Yorks.—B.C. recommended to apply for sanction to borrow £2,157 for the construction of a new water main to serve the new housing development in Darlington Road and £3,153 for provision of new main from the high zone reservoir to serve the new development in Sycamore Avenue and to bring the Hurgill Road system into the circuit.

Smallburgh, Norfolk.—C.C. recommended to approve, in principle, for grant aid, R.D.C.'s water supply scheme for Barton Turf and Irstead and scheme for additional local extensions to Ludham, Potter Heigham, Catfield, Hickling, Hingham, Happisburgh, Horning, Dilham, Worstead, Swanton Abbott and Felmingham. Estimated cost £19,400 and £80,000, respectively.

Standish-with-Langtree, Lancs. — U.D.C. to apply for sanction to borrow £2,890 for water main extensions for private housing development on the Robin Hill Lane, Rectory Lane East and Wigan Lower Road estates, etc.

Swaffham, Norfolk.—R.D.C. to submit for Ministry approval scheme for link-up of water mains between the two schemes at Gooderstone and Oxborough. Estimated cost £2,059.

Tunbridge Wells, Kent. — B.C. recommended to approve the laying of a water main at Fordcombe Lane, Poundsbridge Hill and the renewal of water mains in various roads. Estimated cost £1,350 and £6,960, respectively (recommended).

Wantage, Berks.—Thames Valley Water Board have approved the construction of a reservoir at Chain Hill, for U.D.C. Estimated cost £21,100.

HARBOURS, PIERS AND SEA DEFENCE WORKS

Amble, Northumb. — U.D.C. surveyor to prepare a scheme for sea wall at Old Quarry.

Blyth, Northumb. — B.C. recommended to construct a two-mile sea wall as part of a scheme to prevent coast erosion.

Hastings, Sussex. — B.C. recommended to prepare an outline scheme for the development of the foreshore between West Marina and Glyne Gap.

Milford Haven, Pembs.—Milford Haven Conservancy Board have approved plans for the construction of a pier and protected boat harbour at Hubbertson Point. Estimated cost £100,000.

Portsmouth. — City Council recommended to prepare scheme to provide deep water moorings, two hards and hardstanding for car parking adjacent to the proposed embankment at Milton Lake; invite tenders for the construction of the fitting-out berth at the Inner Camber.

HEATING AND VENTILATING

Barnsley, Yorks.—B.C. recommended to approve scheme submitted by R. R. Jennings and Partners, civil engineers, 35 Byrom Street, Deansgate, Manchester, 3, for reinstatement of the heating and ventilation system, etc., at public baths. Estimated cost £11,800.

Eastbourne, Sussex.—B.C. recommended to approve plans for the installation of heating in the first stage of the new College of Further Education at St. Anne's Road and Selwyn Road.

Kesteven. — E.C. propose the installation of new heating system in Grantham St. Anne's and Ropsley C. of E. Schools. Estimated cost £3,450 and £2,970, respectively.

Kettering, Northants.—R.D.C. have approved the installation of hot water systems and associated improvements to 19 pre-war houses at Pytchley, six at Cranford and four at Loddington. Estimated cost £4,585.

Salisbury, Wilts.—Wessex Regional Hospital Board recommended to appoint Harding, McDermott and Partners, 17 Doughty Street, London, W.C.1, as consulting engineers, for mechanical and electrical works at the senior nurses' training school, Salisbury General Hospital.

HOUSING SCHEMES

Aberdeen.—Department of Health have approved in principle the Gallogate redevelopment scheme, including maisonnettes, an 11-storey block, shops and a community centre.

Alsager, Ches. — U.D.C. recommended to approve the erection of 12 old people's bungalows at Cedar Avenue.

Ampthill, Beds.—U.D.C. have approved plans for 12 houses at Station Road.

Barnsley, Yorks. — B.C. recommended to invite tenders, subject to Home Office approval, for the erection of a further five police houses, one on a site at Moxon Square, Ardsley, and two pairs at junction of Smithies Lane/Honeywell Grove, and in Honeywell Grove, respectively.

Barrow-in-Furness, Lancs. — B.C. recommended to grant Town Planning consent, in principle, for the erection of 12 flats with 12 lock-up garages at Fairfield Lane-East Mount.

Belvedere, Kent.—Royal Alfred Merchant Seamen's Society, 76 Ibex House, Minories, London, E.C.3, are to erect 26 houses at The Manor, Upper Park Road.

Bideford, Devon.—B.C. recommended to proceed with the preparation of drawings, etc., for the erection of 15 houses this year.

Birkenhead, Ches.—B.C. recommended to negotiate a tender for the erection of three 14-storey blocks of flats at Upton By-pass (south side); approve layout for the erection of 124 dwellings and 28 garages at Queensbury Street redevelopment area.

Bishop Auckland, Dur.—U.D.C. Surveyor to prepare plans for the erection of old people's houses at Eldon Lane, Leasingthorne, Binchester Blocks, Newfield, and Witton Park.

Blyth, Northumb. — Borough Engineer to prepare plans for 14 bungalows in the Plessey Road and Delaval Gardens area.

Bournemouth, Hants.—B.C. have approved scheme for six aged persons' bungalows at end of Paget Road and West Howe Close, Kinson.

Brackley, Northants.—B.C. propose the construction of 50 houses between Banbury Road and council estate at Beaumont Crescent.

Bridgnorth, Salop.—R.D.C. have approved layout plan for 70 houses at Alveley, for Annol Builders, Ltd., 300 Slade Road, Erdington, Birmingham. Plans to be submitted to County Planning Committee for approval.

Bridlington, Yorks.—Board of Trustees have approved plans prepared by Francis F. Johnson, 16 High Street, for 12 almshouses on a site of the former St. Anne's Convalescent Home at the junction of St. Anne's Road and Sands Lane with Flamborough Road. Plans yet to be approved by the local authority.

Bury, Lancs.—B.C. to consider scheme for erection of 40 single-bedroom flats on land in Price Street and Killon Street.

Chatham, Kent.—B.C. recommended to submit to C.C., for approval, plans for the one five-storey blocks of maisonnettes at erection of 22 houses and one seven-storey and Hardstown redevelopment area.

Cheltenham, Glos.—B.C. recommended to negotiate a tender with G. Wimpey and Co., Ltd., for the construction of 76 No Fines dwellings for old people and provision of roads and sewers at Arle House site.

Chester-le-Street, Dur. — A scheme by S. Reed, North Lodge, for the erection of 161 houses at Low Flatt Road, has been the subject of a Ministry inquiry.

Chigwell, Essex.—U.D.C. propose the erection of five blocks of flats and 32 garages on the site of Southfleet and The Chestnuts, High Road.

Clitheroe, Lancs.—R.D.C. have approved plans for four pairs of semi-detached houses in Sydney Avenue, Whalley.

Colchester, Essex. — B.C. to prepare plans for the conversion of The Cannons, Layer Road, into flatlets.

Coleraine, Londonderry.—R.D.C. have approved the erection of 132 houses at Churchlands, for Northern Ireland Housing Trust, 12 Hope Street, Belfast.

Consett, Dur. — Turner and Townsend, 50 Saddler Street, Durham, have been appointed quantity surveyors by the County Water Board for houses at Consett depot.

Cwmbran, Mon.—U.D.C. have approved scheme for the erection of 210 houses at Penywaun.

Dewsbury, Yorks. — B.C. recommended to negotiate with Fell Construction Co., Ltd., for the erection of three-storey blocks of six flats on the Thornton Road redevelopment area and the Westtown redevelopment area 2.

Doncaster, Yorks.—R.D.C. recommended to authorise the surveyor to negotiate a tender for 50 houses with R. Dunkerley, and a tender for more houses with Selleck Nicholls and Co., Ltd.

Dundee, Angus.—Housing Committee have approved a layout plan by the City Architect for 330 houses at Midmill.

Eastbourne, Sussex.—B.C. recommended to invite tenders for the erection of 21 houses at Langley Village and 23 at Spots Farm.

Epsom and Ewell, Surrey. — B.C. recommended to appoint D. J. Bendle, 7 Station Way, Cheam, as quantity surveyor, for the West Street, Ewell, housing scheme.

Folkestone, Kent.—B.C. recommended to approve outline applications for the erection of 110 self-contained flats in seven- to 11-storey blocks, incorporating garage accommodation at Castle Bay, The Esplanade, for J. Mowlem and Co., Ltd., 91 Ebury Bridge Road, London, S.W.1.

Glastonbury, Som.—B.C. recommended to proceed with scheme for the erection of seven houses, four bungalows and eight garages at Wells Road.

Haslingden, Lancs.—B.C. recommended to approve in principle the erection of a block of three-storey two- and one-bedroom type flats on land at top of town area.

Hastings, Sussex.—B.C. recommended to grant planning consent, subject to conditions, for the erection of three blocks, each comprising 60 flats on 15 floors, with garage accommodation, storage and laundry rooms on two floors below ground floor level, on land adjoining 21 Woodland Vale Road, for Newdan Property Investment Co.,—Dinerman, Davison and Hillman and Partners, architects, 13 Perrins Lane, London, N.W.3; approve outline application, subject to conditions, for the erection of a four-storey block of six flats and a 12-storey block of 33 flats, all with basement garages at the Roxy Cinema site, London Road and land at rear of 359-371 London Road, for E. Lyons and A. H. Francis—Kenneth Anns, architect, 1 Lincoln's Inn Fields, London, W.C.2.

Leeds.—City Council recommended to approve revised layout plan for the erection of two 10-storey point blocks of flats on an area of land off York Road, Wykebridge.

Lichfield, Staffs.—R.D.C. to submit to Ministry and C.C. for approval, draft plans for 80 houses at Oakdene estate, Burntwood.

Manchester.—Town Planning Committee have approved the erection of a nine-storey block of flats in Kingsgate Road, Woodhouse Park, Wythenshawe.

Grantham, Lincs.—Ministry have approved B.C.'s housing programme of 135 dwellings.

Reading, Berks.—B.C. recommended to approve the detailed layout for the development of land off St. Michael's Road, St. Michael's estate extension, and to invite tenders in due course for the erection of 27 dwellings and 47 garages.

Rushden, Northants.—U.D.C. recommended to obtain tenders for the erection of 38 dwellings at Grafton Road.

St. Albans, Herts.—City Council recommended to approve scheme for the erection of old person's dwellings at Mount Pleasant.

City Council recommended to approve plans for the erection of 42 semi-detached houses at Verulam estate, for William Old, Ltd., Tolpits Lane, Rickmansworth.

Scunthorpe, Lincs.—B.C. recommended to appoint G. A. Jellicoe, 19 Gower Street, London, W.C.1, as architect, for the block of flats on field 232 at Westcliff estate; approve plans for 68 houses, 42 flats and 114 garages at Westcliff estate.

Sheffield.—City Council recommended to approve layout plans for erection of 114 dwellings, one shop and 36 garages in the vicinity of Bramwell Street, within the the Netherthorpe redevelopment area.

Southport, Lancs.—B.C. recommended to authorise Borough Architect to negotiate a tender with Sir Robert Lloyd and Co., Ltd., Bromborough, for erection of 20 houses on the Staveley Road housing site; Borough Architect to prepare sketch plans for erection of blocks of flatlets on land on the north-westerly side of Threlfalls Lane.

Sunderland, Dur.—Housing Committee have approved layout of sites at Farringdon and Percy Terrace, for the erection of 50 houses for sale.

Sutton and Cheam, Surrey.—B.C. have approved the following: demolition of three houses, 38-42 Thicket Road, and erection of three-storey block of 24 flats and 24 garages, for New Ideal Homesteads, Ltd., Mead House, South Street, Epsom; demolition of 88 Benhill Wood Road and 1 Elgin Road, and erection of ten flats and eight garages, for National Provincial Bank, Ltd. 15 Bishopsgate, London, E.C.2.

Tadley, Hants.—Co. Planning Committee recommended to grant planning permission for 62 houses off Rowan Road and West Street, for Hornchurch Construction Co., Ltd., 81a Front Lane, Cranham, Upminster, Essex.

Walsall, Staffs.—B.C. recommended to approve layouts for 32 flats in an 8-storey block and 36 garages on the cemetery site and 32 flats in an 8-storey block, 10 2-storey houses and 19 garages in the flats redevelopment area, Field Road, Bloxwich, 32 flats in an 8-storey block and 16 garages at Green Lane, and a hostel providing flatlets for old people with a resident warden in the Forge Street Green Lane area of Old Birchills; revised layout for 28 old persons' one-bedroom flats at West Bromwich Road.

Wallsend, Northumb.—B.C. to negotiate a price with J. H. James, Archer Street, Willington Quay, for the erection of 16 bungalows at Village Green Farm, and four on Low Willington Farm estate.

Washington, Dur.—Elso Properties, Ltd., 30 Ridley Place, Newcastle upon Tyne, are planning houses at Oxclose Road; J. J. Robson and Co., Peareth Hall Road, Springwell, are to erect houses at Glebe Crescent; W. Leech, Ltd., St. James Street, Newcastle upon Tyne, are planning housing developments at Village Farm; Thomas Armstrong, Ltd., Robson Street, Newcastle upon Tyne, are to erect houses at Heworth Road.

Wellington, Salop.—U.D.C. to invite selected firms to submit their own schemes for the first phase of the Dothill estate to provide 150 units of accommodation.

Wolverhamoton, Staffs.—B.C. recommended to approve scheme for 30 dwellings at Coronation Road.

PLAYING FIELDS, PARKS, ETC.

Aldridge, Staffs.—U.D.C. have approved the provision of children's playgrounds on the housing sites at Barns Lane, Rushall and Railswood, Pelsall. Estimated cost £1,750 and £2,100 respectively.

Amesbury, Wilts.—Ministry have approved the use of land at Holders Road estate as a children's playground, for R.D.C.

Birmingham.—City Council recommended to approve schemes for laying out West Heath recreation ground and provision of additional Gardens of Rest at Lodge Hill and Yardley Crematoria. Estimated cost £41,062 and £3,200, respectively.

Bristol.—City Council have approved purchase of land at junction of Newton Street and Pennywell Road, Easton, for use as a public open space.

Cardiff.—City Council recommended to proceed with schemes for the provision of children's playgrounds at Lydstep Crescent, Gabalfa and the development of Llanrumney open space. Estimated cost £2,465 and £42,545 respectively.

Chatham, Kent.—B.C. recommended, subject to Ministry approval, to approve the provision of a children's playground at the rear of 209-251 (odd) Castle Road.

Fulham.—B.C. recommended to approve proposals for provision of a playground and car parking area in Heckfield Place, at Lancaster Court. Estimated cost £5,000.

Leeds.—E.C. recommended to apply to the M.E. for sanction to borrow £3,000 for improvements to a portion of the proposed Central Colleges playing fields at Adel.

Middlesbrough, Yorks.—B.C. recommended to approve the provision of two tennis courts at N.A.L.G.O. sports field. Estimated cost £1,311.

Penryn, Corn.—B.C. recommended to apply for sanction to borrow £1,000 for the provision of a playing field at Brook Place.

Salisbury, Wilts.—City Council recommended to approve, subject to Ministry approval, scheme for the demolition of Crane Lodge and the land developed as an open space adjoining Queen Elizabeth Gardens.

Scarborough, Yorks.—B.C. to convert allotments on the south side of Woodlands Ravine into a small park. Estimated cost £5,500.

Standish-with-Langtree, Lancs.—U.D.C. have approved scheme for laying out rest garden at the Society of Friends' old burial ground off Preston Road. Estimated cost £707.

Swindon, Wilts.—B.C. recommended to approve scheme for the further development of the Walcot and Park North amenity area. Estimated cost £10,000.

Tunbridge Wells, Kent.—B.C. recommended to submit to C.C. for approval, plans for the extension of a sports field and car park, adjoining Nevill Cricket Ground, Warwick Park.

RIVER AND FLOOD PREVENTION WORKS

Haverhill, Suffolk.—Ministry have approved scheme for improving the Stour Brook, for the Essex River Board.

Kington, Heres. — Wye Catchment Board have approved scheme to alleviate flooding in the village of Eardisley. Estimated cost £3,525.

Stowmarket, Suffolk.—Land Drainage Committee of the East Suffolk and Norfolk River Board to submit for planning approval, scheme for the construction of a weir across the River Gipping, near the bridge at the Suffolk Iron Foundry.

Surrey.—C.C. propose to restore 11½ miles of Thames towpaths during the next five years. Estimated to cost £9,500 for each of the first two years and £23,000 for each of the next three years, the annual cost of keeping the banks in repair will be £7,000.

Bexley, Kent.—B.C. to prepare a scheme for making-up Wansunt Road.

ROADS, BRIDGES AND SITE WORKS

Billinge and Winstanley, Lancs. — U.D.C. surveyor has been instructed to prepare scheme for making of a lay-by at junction of Buckley Road and Rainford Road.

Birkenhead, Ches. — B.C. recommended to approve scheme for the repair of drives and paths at Birkenhead Park. Estimated cost £13,000.

Birmingham.—City Council recommended to approve, subject to Ministry approval, schemes for the construction of an underpass at Six Ways, Aston, estimated cost £930,000; improvement works at junction of Stratford Road, Stoney Lane and Walford Road, £40,150; widening and reconstruction of Hurst Street, £7,000; improvement of Stonehouse Lane, California, £26,000; regrading part of Martineau Street, £15,000.

Brownhills, Staffs.—Co. Roads and Bridges Committee have approved, in principle, U.D.C.'s scheme for the improvement of Fordbrook Lane. Estimated cost £21,888.

Burton-upon-Trent, Staffs. — B.C. recommended to invite tenders for the reconstruction of High Street, Lichfield Street (part) and Rosliston Road (part) and the construction of apron, access road and hardstanding for six garages at Bladon Street site.

Chatham, Kent. — B.C. recommended to proceed, subject to planning permission, with the provision of a car park at the junction of Yarrow Road/Speedwell Avenue; approve plans for making-up Allison Avenue (part) and Hunters Way West (part); submit to M.T. for approval and invite tenders in due course for scheme for the reconstruction of New Road Avenue (stage 2).

Denbighshire.—C.C. have received grant of £30,739 towards the cost of a new bridge to carry the Ruabon-Llangollen road over the Shropshire Union Canal at Wenffrwd and improved approaches. Total estimated cost £41,000.

Eastbourne, Sussex. — B.C. recommended to prepare plans for making-up a passageway at rear of 2-12 Beach Road; to invite tenders for making-up the passageways at the rear of Rylstone Road and Latimer Road (part) and Coombe Lane (part).

Epsom and Ewell, Surrey. — B.C. recommended to approve plans for making-up of Westcott Way (part), Cheam.

Folkestone, Kent. — B.C. recommended to apply for sanction to borrow £1,070 and £3,580, respectively, for making-up Shorncliffe Road (part) and Wellington Road.

Gateshead, Dur.—British Railways (North-Eastern Region), York, are to rebuild the Lobley Hill Road railway bridge, and work will commence during the current year.

Gosport, Hants.—B.C. recommended to apply for sanction to borrow £41,282 for the making-up of eight roads.

Hampshire. — M.T. have approved three schemes for the construction of a passing place on North Street, an additional carriageway on the A.31 at Shant Hill, Ropley, and improvements to the A.35 at Hounsdown, for Roads and Bridges Committee. Estimated cost £15,000, £16,000 and £20,000, respectively.

Hastings, Sussex. — B.C. recommended to proceed with repairs to paths at Gensing Gardens and the resurfacing of Chatham Road and Western Road, estimated cost £900, £2,000 and £2,520, respectively; approve plans and apply for sanction to borrow £7,504 for making-up Windmill Road.

Inverness-shire.—C.C. is to carry out the first stage of reconstruction on the Kyleakin-Portree Road, Isle of Skye, between Sligachan Inn and Sconser Lodge. Estimated cost £190,000.

Kingston-on-Thames, Surrey.—B.C. propose to construct a car park at Anglesea Square, Palace Road. Estimated cost £1,200.

Leeds.—Town Planning Committee have approved scheme for improving Lidgett Lane, Roundshay. Estimated cost £24,000.

Leeds.—City Council recommended to apply for sanction to borrow £18,300 for siteworks and construction of roads and sewers at Oldfield Lane; to approve realignment of kerbs, widening of carriageway and construction of new length of footpath at the junction of Low Road and Pepper Lane. Estimated cost £2,750.

Manchester.—City Council recommended to apply for sanction to borrow £118,400 for roads and sewers, redevelopment area, Mill Street, Ancoats.

Middlesbrough, Yorks.—B.C. recommended to approve scheme for improvement of Park Road North/Park Vale Road junction. Estimated cost £5,000.

Middlesbrough, Yorks.—B.C. recommended to approve scheme prepared for the Town Farm allotments site which provides for the layout of roads in the first section, provision of chain link fencing to the eastern, southern and western boundaries, water supply, hedges and a planted strip alongside Cargo Fleet Lane. Estimated cost £3,000; to approve scheme for cycle track along Longlands Road frontage, with outlets at comparatively safe places at the layby near St. Joseph's cemetery, and near the Brambles Farm Hotel. Estimated cost £4,200.

Neath, Glam. — B.C. have approved plans for the construction of a new road through Fairfield and the development of Gnoll Park Road in connection with the Inner Road relief scheme.

Newcastle - under - Lyme, Staffs. — B.C. recommended to approve plans for the making-up of Silverdale Street, Audley Street and Grove Road at Knutton; submit to Ministry, for approval and grant aid, plan for diversion of class 2 road to Knutton, from Knutton Lane to Waterloo Works. Estimated cost £31,000.

Newcastle upon Tyne.—City Council recommended to submit to the M.T. an application for approval of roundabout with underpass scheme, at junction of Pilgrim Street and City Road. Estimated cost £900,765.

Newport, Mon.—B.C. recommended to proceed with scheme for the construction of Spytty Road, stages 1 and 2. Estimated cost £151,000.

North Riding.—John Laing and Sons, Carlisle, and Le Grand, Sutcliff and Gell, Ltd., Southall, Middx., have been asked by the E.C. to carry out site preparation works for the proposed Whitby West County Modern School, and Scarborough Girls' Modern School, respectively.

Oswestry, Salop.—B.C. to apply for sanction to borrow £1,805 to improve the road at Lakeholme Corner, Welsh Walls.

Co. E.C. recommended to approve the provison of four hard tennis courts at Oswestry Girls' Modern School. Estimated cost £2,350.

Portsmouth.—City Council recommended to approve plans for making-up Dorking Crescent; schemes for resurfacing part of Edinburgh Road and the reconstruction of the eastern end of Charlotte Street. Estimated cost £3,560 and £2,000, respectively.

Port Talbot, Glam. — B.C. to submit to M.T., for approval, scheme for the reconstruction and widening of bridge at Newbridge Road, Aberavon. Estimated cost £75,000.

Reading, Berks.—B.C. recommended to submit to M.T. for grant aid, a major scheme for the improvement of St. Peter's Hill; approve the construction of a footpath at Peppard Road and the provision of kerbing at Bath Road. Estimated cost £9,000, £2,000 and £1,000, respectively.

Sheffield. — City Council recommended to authorise city engineer to carry out widening and improvement of East Bank Road, between Farm Road and East Road. Estimated cost £60,000.

Staffordshire.—C.C. recommended to approve scheme for widening and reconstruction of Yelsway Lane, Waterhouses. Estimated cost £24,000.

Stratford-upon-Avon, War.—B.C. recommended to prepare plans for making-up part of New Broad Street.

Uxbridge, Middx. — C.C. recommended to approve, subject to grant aid, scheme for improvements to Rickmansworth Road, Harefield, between Newdigate Road and Hall Drive. Estimated cost £6,425.

Wallsend, Northumb.—B.C. submitted to the C.C. a £5,840 scheme for the construction of a roundabout at the Coast Road-Churchill Street junction, Willington Quay; propose to spend £5,100 improving the Coast Road-Kings Road junction, and £3,835 widening the carriageway at Rosehill Bank.

Washington, Dur.—U.D.C. Surveyor has prepared a £6,100 estimate for making-up road leading to Cook's Works.

Wednesbury, Staffs.—C.C. have approved schemes for asphalt surfacing of Upper High Street and re-laying of kerb and tarmac footpath in Manor House Road and Park Lane. Estimated cost £1,000 and £1,173, respectively.

Wellingborough, Northants.—U.D.C. have prepared a provisional scheme for widening Herriott's Lane near junction with Great Park Street.

Wembley, Middx.—C.C. recommended to approve, subject to grant aid, scheme for the construction of a roundabout layout at junction of Harrow Road and Bridgewater Road. Estimated cost £57,525.

SEWERAGE, SEWAGE AND REFUSE DISPOSAL

Bridlington, Yorks.—B.C. to instruct the consulting engineers to prepare plans, etc., for rerouting of the next stage of sewerage scheme.

Eastbourne, Sussex.—B.C. recommended to prepare plans for an extension to the foul water sewer at Langley Rise, to the slaughter-house.

Evesham, Worcs. — R.D.C. to apply for sanction to borrow £10,000 for the Abbots Morton sewerage scheme.

Fleetwood, Lancs. — City Council recommended to approve extension of replacement works over a further distance of 25 yards or thereabouts in a southerly direction to the Fleetwood Road sewer. Estimated cost £4,000.

Halesworth, Suffolk.—East Anglian Regional in principle the provision of a 21in. sewer from East Road to Coneygar Lane, for B.C.

Halesworth, Suffolk.—East Anglian Regional Hospital Board recommended to approve the appointment of D. Balfour and Sons, 131 Victoria Street, London, S.W.1, as consulting engineers for connecting Risbridge Home, Keddington, to the public sewer.

Martley, Worcs.—R.D.C. recommended to prepare a sewerage and sewage disposal scheme for Martley parish.

Nantwich, Ches.—R.D.C. to submit to Ministry for approval sewerage scheme for Audlem. Estimated cost £79,000.

Ryde, I. of W.—B.C. to apply for sanction to borrow £2,175 to connect Appley estate conveniences to public sewer.

Stockport, Ches.—B.C. recommended to apply for sanction to borrow £1,160 for improvements to the drainage at Longford Road West playing field.

Tunbridge Wells, Kent.—B.C. recommended to prepare a detailed scheme for improvements to the existing drainage and pumping arrangements in the Dunorlan Park area.

West Kesteven, Lincs. — R.D.C. have approved, in principle, sewerage and sewage disposal scheme for Woolsthorpe. Estimated cost £35,600.

STREET LIGHTING

Blaby, Leics.—Parish Council to apply for sanction to borrow £2,700 for the installation of sodium lighting along the main street through the parish.

Bridgnorth, Salop.—Highways and Estates Committee recommended to approve scheme for improving street lighting in various roads. Estimated cost £3,700.

Bridlington, Yorks.—B.C. have approved spending of £1,555 on street lighting improvement in the borough.

Cheltenham, Glos. — B.C. recommended to approve schemes for improved street lighting in various roads during 1960-61. Estimated cost £8,115.

Durham.—City Council to apply for sanction to borrow £4,090 for street lighting.

Fulham.—B.C. recommended to approve the second stage of the side street lighting programme to be carried out by the Borough Surveyor during 1960-61. Estimated cost £20,000.

Nottingham. — City Council recommended to approve scheme for improved lighting at Gregory Street (from Derby Street to Abbey Road). Estimated cost £1,110.

Ormskirk, Lancs.—U.D.C. have approved street lighting programme for 1960-61. Estimated cost £5,444.

Shildon, Dur.—U.D.C. to spend £5,472 on street lighting improvements.

Sunderland, Dur.—B.C. to apply for sanction to borrow £16,800 for street lighting on the new Town End Farm estate.

CONTRACTS

*Full details of the Contracts marked * will be found in our Advertisement Columns.*

BUILDING AND DECORATING
(See also Housing Schemes)

Abingdon, Berks. — External painting and ancillary work to the following dwellings, for R.D.C.: Contract (1) 61 houses and 10 bungalows at Radley; (2) 34 houses at Sutton Courtenay; (3) 11 houses at Appleton; (4) seven houses at Appleford; (5) 56 houses and 18 bungalows at Wootton; (6) 16 houses at Southmoor; (7) 23 houses and two bungalows at Kennington; (8) 25 houses at Sunningwell and Bayworth. Documents from the Housing Manager, Council Offices, 60 Bath Street, Abingdon. Tenders by May 12.

Alnwick, Northumb.—Conversion of 18-20 St. Michael's Lane into two flats, for U.D.C. Applications to G. Beaty town surveyor, the Council House, Wagonway Road, Alnwick. Deposit £2 2s. Tenders by May 23.

Alnwick, Northumb. — Dry spar dashing of external walls of 34 houses at Shilbottle (Kiln Lonnen, Widdrington Cottages and The Crescent), contract 1/1960, for R.D.C. Documents from O. M. Farrell, engineer and surveyor, 34 Green Batt, Alnwick. Tenders by May 9.

Ashbourne, Derbys.—Site preparation, access road and the erection of nine brick garages in rear of The Plain, off Luke Lane, Brailsford, for R.D.C. Documents from A. Percy Taylor, architect, Midland Bank Chambers, Belper, Derbyshire. Deposit £1 1s., cheques payable to R.D.C. Tenders by May 4.

Basford, Notts.—External painting of houses as follows, for R.D.C.: Northern district—(group 1) Annesley, Bestwood, Linby—64 dwellings plus six garages; (2) Brinsley—88 dwellings plus six garages; (3) Cossall—66 dwellings; (4) Kimberley—164 dwellings; (5) Nuthall—140 dwellings; (6) Selston—389 dwellings plus 30 garages; southern district—(7) Barton—21 dwellings; (8) East Leake—90 dwellings plus 28 garages; (9) Costock, Rempstone, Thrumpton, Wysall—20 dwellings. Documents from the Council's Engineer, Surveyor and Housing Architect, Rock House, Basford, Nottingham. Deposit £2 2s. Tenders by May 9.

Basford, Notts.—Internal and external painting of the following, for R.D.C.: Parish of Kimberley—depot, Newdigate Street, conveniences, Main Street; parish of Brinsley—conveniences, Cordy Lane; parish of Ruddington—conveniences, Wilford Road; parish of Selston — conveniences Jacksdale, conveniences, Underwood, conveniences, Selston; parish of Normanton-on-Soar—construction of brick bus shelter. Documents from the Engineer, Surveyor and Housing Architect, Rock House, Basford, Nottingham. Deposit £2 2s. Tenders by May 9.

Belfast.—Complete internal repainting of St. Louise's Secondary Intermediate School for Girls, Clondara Street, Belfast. Documents from P. and B. Gregory, chartered architects, 5 Crescent Gardens, University Road, Belfast. Tenders by May 5.

Belfast.—Restoration and cleaning of stonework (second stage) at Custom House, Custom House Square, Belfast, 1, for Ministry of Finance. Documents from Room 103, Law Courts Building, Belfast, 1. Deposit £2. Tenders by May 5.

Belfast. — Painting work at Willowbank Playcentre, Falls Road, for City Council. Documents from the City Architect's Office (Room 53), City Hall, Belfast, 1. Tenders by May 5.

Biddulph, Staffs.—External painting of the following properties, for U.D.C.: One hundred and ten dwellinghouses and 24 bungalows on the Park Lane estate; 26 dwellinghouses on the Braddocks Hay estate; one bungalow in Congleton Road. Documents from A. D. Robinson, housing manager, Council Offices, Biddulph. Deposit £1 1s., cheques payable to Council. Tenders by May 9.

Bournemouth, Hants.—Erection of a combined cleansing unit at Stokewood Road Baths, Winton, for B.C. Documents from the Borough Architect (Room 106), Town Hall, Bournemouth. Deposit £2 2s. Tenders by May 11.

Carmarthen.—Conversion of The Baffalo Inn, Bridge Street, into club and headquarters for the Carmarthen R.F.C. Applications to Harold Thomas, surveyor and valuer, 24 Lammas Street, Carmarthen, by April 30.

Cardiganshire.—Decorating work at the following educational establishments, for C.C.: Aberayron district — Aberarth C.P. (I); Cilcennin C.P. (I); Llanarth School House (E); Llanllwchaiarn C.P. (E); Mydroilyn C.P. (I); New Quay C.P. (E and I); Talgarreg C.P. and House (E and I); Aberayron Secondary; Aberystwyth district—Aberystwyth C.P. Eng. (I);Capel Seion C.P. (I and E); Cofadail C.P. and House (I and E); Comminscoch C.P. (I); Eglwysfach C.P. (I); Goginan C.P. (E); Gors C.P. (E); Llancynfelin C.P. (I); Llanfarian C.P. (I); Llan-y-Creuddyn C.P. (I); Llangwyryfon C.P. and House (E); Llanilar C.P. (I); Myfenydd V.P. (I); Penparcau C.P. (I); Penrhyncoch C.P. kitchen; Ponterwyd C.P. (I); Trefeurig C.P. (I); Dinas S.M. School; Cardigan district—Beulah School House (E); Cardigan C.P. Mixed (I); Cardigan central kitchen (I); Penyparc C.P. (E); Cardigan Grammar; Lampeter district—Bettws Bledrws V.P. (E); Ffynnonbedr C.P. (I); Llanfair C.P. (I and E); Llangybi C.P. and House (E); Llanwenog V.P. (I); Lampeter Secondary; Highmead Residential School; Llandysul district—Aberbanc V.P. (E); Brongest C.P. (I and E); Glynarthen C.P. (E); Pontshaen C.P. (I); Pontshaen House (E); Trewen School kitchen; Llandysul Grammar; Tregaron district—Bronnant C.P. (E); Llanddewi Brefi House (E); Llangeitho C.P. and kitchen (E); Swyddffynnon House (E); Ysbyty Ystwyth C.P. (I); (I—internal, E—external.) Documents from the County Architect, County Hall, Aberayron, Cards. Tenders by May 5.

Corrardaghy, Fermanagh.—Erection of the new voluntary primary school (85 pupils), together with ancillary buildings and site works, at Corrardaghy. Documents from John A. Tynan, quantity surveyor, 33 Malone Road, Belfast. Deposit £5. Tenders by May 7.

Cookham, Berks.—Works of external redecoration and ancillary repairs to 1 to 8 Woodland Cottages, Whyteladyes Lane, Cookham Rise, for R.D.C. Documents from A. Mandeville, engineer and surveyor, Council Offices, Oaklands, 1 Bath Road, Maidenhead. Deposit £2 2s. Tenders by May 12.

Colchester, Essex.—Construction of 152 lock-up garages as follows, for B.C.: Monkwick housing estate, 109 garages on four sites; Shrub End housing estate, 43 garages on three sites. Documents from J. S. Orchard, borough engineer, 1 West Stockwell Street, Colchester. Deposit £3. Tenders by May 9.

Cornwall.—Following, for C.C.: (a) Falmouth, Beacon County Primary Infants' School—internal decoration; (b) Truro County Secondary Boys' School—external painting and internal decoration. Applications to the County Architect, County Hall, Truro, by April 30. Tenders by May 27.

Croydon, Surrey.—Alteration and adaptation of classrooms at the Selhurst Boys' Grammar School, for B.C. Applications to the Chief Education Officer, Katherine Street, Croydon. Deposit £1. Tenders by May 31.

Deben, Suffolk.—External painting of the following, for R.D.C.: Eight dwellings, Bovton; 20 dwellings, Bucklesham; eight dwellings, Butley; 16 dwellings, Charsfield; four dwellings, Chillesford; six dwellings, Clopton; 14 dwellings, Dallinghoo; eight dwellings, Falkenham; 40 dwellings, Hollesley; 20 dwellings, Rushmere; eight dwellings, Sudbourne; eight dwellings, Sutton; 16 dwellings, Trimley St. Martin; five dwellings, Trimley St. Mary; 24 dwellings, Wickham Market. Documents from Engineer and Surveyor, Melton Hill, Woodbridge. Tenders by May 9.

Deben, Suffolk.—Improvements to dwellings in the following parishes, for R.D.C.: Chillesford, four; Bromeswell, eight (two sites); Hollesley, 18 (two sites); Bredfield, six; Otley, eight (two sites); Bucklesham, 18 (two sites). The work consists of laying on water internally, provision of bathrooms, installation of w.c.s and drainage system. Documents from the Engineer and Surveyor, Council Offices, Melton Hill, Woodbridge, Suffolk. Deposit £2 2s. Tenders by May 11.

Deptford.—Construction of surface public convenience at Deptford Broadway, for B.C. Documents from the Borough Engineer and

Surveyor, Deptford Town Hall, New Cross, London, S.E.14. Tenders by May 9.

***Dudley, Worcs.**—Erection of garages at Russells Hall estate, for B.C. Apply by May 3. Deposit £2 2s.

Durham.—Following, for C.C.: Ryton Child Welfare Centre and Dental Clinic—(a) heating installation; (b) electrical installation; standard police houses—type C, Redwood Esh Winning—erection of single house with office. Applications to the County Architect, South Street, Durham, by May 4.

East Dereham, Norfolk.—External painting of houses in groups as follows, for U.D.C.: Contract 1—38 houses, Moorgate Road; 2—22 houses, Crown Road, two houses, Cemetery Road; eight houses, School Terrace; 3—20 prefabricated bungalows, The Grove. Documents from the Housing Officer, Assembly Rooms, Dereham. Tenders by May 11.

***Eastleight, Hants.**—Shops and flats and precinct layout at Velmore housing estate (stage 7), for B.C. Apply by May 3. Deposit £2 2s. Tenders by June 6.

East Lothian.—Cleaning and painting of Victoria Bridge, Haddington, for C.C. Documents from the County Surveyor, County Buildings, Haddington.

East Riding.—Erection of a three-classroom instalment (approximately 4,800 sq. ft.) of a new county primary school at Melbourne, near York, for C.C. Applications to the County Architect, County Hall, Beverley. Deposit £2, payable to County Treasurer. Tenders by May 10.

Essex.—External painting and general repairs to 20 smallholders' houses and buildings at Straight Road and Horkesley Road, Boxted, near Colchester, for C.C. Documents from the County Land Agent and Valuer, 69 Duke Street, Chelmsford. Tenders by May 9.

Farnborough, Hants.—Supply and erection on ready prepared concrete bases, of 144 prefabricated garages on various housing estates, as follows, for U.D.C.: Beech Road, 17; Birchett Road, 20; Blackthorn Crescent, 59; Churchill Crescent, 25; Clayton Road/Neville Duke Road, 23. Documents from the Engineer and Surveyor, Municipal Offices, Alexandra Road, Farnborough. Tenders by May 23.

Fifeshire.—Public convenience at Glenrothes, for C.C. Applications to the County Clerk, Cuper, Fife, by April 30.

Garforth, Yorks.—Fixing only of lavatory basins in approximately 290 houses, for U.D.C. Documents from the Engineer and Surveyor, Council Offices, Main Street, Garforth. Deposit £1. Tenders by May 11.

Gosport, Hants.—Alterations to kitchen and bathroom, 311 Fareham Road, for B.C. Documents from the office of the Acting Borough Engineer, The Hall, Haslar Road, Gosport. Deposit £1 1s. Tenders by May 4.

Hemel Hempstead, Herts.—External painting of 113 houses at King's Langley, Chipperfield and Bovington, for R.D.C. Documents from the Engineer and Surveyor to the Council, Council Offices, The Bury, Bury Road, Hemel Hempstead. Tenders by May 2.

Horsham, Sussex.—Decorating externally the Capitol Theatre, for U.D.C. Applications to the Surveyor, Council Offices, Horsham Park, Horsham, by April 25, giving details of similar contracts recently undertaken. The work to be undertaken during Aug.

Hungerford, Berks.—Modernisation of six houses, Craven Road, Inkpen, for R.D.C. Documents from W. G. Stanbrook, 37a Bartholomew Street, Newbury. Deposit £2, cheque payable to R.D.C. Tenders by May 11.

Huntingdon.—External painting of 156 houses, for R.D.C. Documents from the Surveyor, J. S. Simms, Montagu House, Huntingdon. Tenders by May 5.

Inverness-shire.—Following works, for C.C.: (a) Alterations to the Nurse's House, Leverburgh, Isle of Harris; (b) alterations to Baleshare Primary School, North Uist; (c) alterations to Eochar Primary School, South Uist; (d) alterations to the Nurse's House, Benbecula, South Uist. Applications to County Architect, The Castle, Inverness, by May 7.

Keighley, Yorks.—Supply and erection of one cricket pavilion, for B.C. Documents from T. L. Ashton, parks superintendent, Registrar's Office, Utley Cemetery, Keighley. Tenders by May 4.

***Kettering, Northants.**—Construction of a cattle market, for B.C. Deposit £5 5s. Tenders by June 20.

Leek, Staffs.—Interior decorations, council offices, 6 Russell Street, for R.D.C. Documents from the Surveyor, 18 Stockwell Street, Leek. Tenders by May 4.

Leek, Staffs.—Erection of toilet, internal and external repairs at council offices, 6 Russell Street, for R.D.C. Documents from the Surveyor, 18 Stockwell Street, Leek. Tenders by May 4.

Lanarkshire.—Painter work at the undernoted schools, for C.C.: Forth J.S. School; New Stevenston R.C. School; Heatheryknowe P. School, East Kilbride. Written applications to D. G. Bannerman, county architect, 34 Albert Street, Motherwell, by April 30, stating the name of schools for which wishing to offer.

Lancashire.—Following, for C.C.: Rewiring of electrical installation at Darwen Spring Bank County Secondary School; alterations and additions at the Moral Welfare Centre, The Grange, Wilpshire, near Blackburn. Work includes structural alterations internally, redecoration, alteration to services, and builders' work in connection with provision of a prefabricated timber pram shelter (to be supplied and erected by nominated sub-contractor), resurfacing of flag and macadam paths, etc.; installation of W.C.s and provision of porches, including drainage at six cottages adjoining the Agricultural Institute, Hutton, near Preston. Applications to the County Architect, P.O. Box 26, County Hall, Preston, by May 2.

Langho, Lancs.—Exterior painting (labour and plant only) of 11 wards at Brockhall Hospital. Documents from M. Lawrence, secretary of the Hospital Management Committee, Brockhall Hospital, Langho, near Blackburn. Tenders by May 10.

Leeds.—Following, for City Council: (a) Exterior painting of Market Hall, Leeds, 2; (b) interior and exterior painting of schools and education premises. Documents from Director of Works, Sweet Street, Leeds, 11, on personal application. Tenders by May 5.

Llanelly, Carms.—Construction of a four-bay garage extension at the depot at Pyll, for R.D.C. Documents from the Architect and Surveyor's Department, 2 Queen Victoria Road, Llanelly. Deposit £1 1s. Tenders by May 3.

Llanelly, Carms.—Painting of 100 dwellings on the following sites, for R.D.C.: Twelve houses at Mynyddbach, Tycroes; six houses at Walter Avenue, Trimsaran; eight houses at Drechen, Pontyberem; 14 houses at Lewis Crescent, Bryn; 14 houses at Maes Tomos, Trimsaran; 20 houses at Thomas Avenue, Ponthenry; 16 houses at Lon yr Ysgol, Dafen; 10 bungalows at Mynyddbach, Tycroes. Documents from the Architect and Surveyor's Department, 2 Queen Victoria Road, Llanelly. Deposit £1 1s. Tenders by May 3.

Llanelly, Carms.—Treatment and repair of sulphate attack damage to houses at Argoed Crescent, Trimsaran, for R.D.C. Documents from the Architect and Surveyor's Department, 2 Queen Victoria Road, Llanelly. Deposit £1 1s. Tenders by May 3.

Llanfyllin, Mont.—Erecetion of new offices, including Council Chamber and Court Room, together with necessary site works, for R.D.C. Documents from Glyn Jones, clerk of the Council, Rural District Council Offices, Llanfyllin. Deposit £2 2s. Tenders by May 23.

Lleyn, Caerns.—Repainting the exterior of front and rear of Council Offices, for R.D.C. Documents from Clerk of the Council, Metro Buildings, Pwllheli. Tenders by May 9.

Lleyn, Caerns.—Painting (between June and September) of traditional type houses at various localities, as follows, for R.D.C.: Lleyn area—Llithfaen; Abersoch; Rhydyclafdy; Bryncroes; Sarn; Dinas; Pistyll; Llaniestyn; Edern; Cae Hendy; Llanbedrog; Eifionydd area—Maes Glas; Llanaelhaearn; Cae'r Ffynnon; Llanystumdwy; Groesffordd; Chwilog; Pentre Felin; Treflan; Fourcrosses; Ger-y-Bont; Abererch. Documents from Council's Office, Metro Buildings, Pwllheli. Tenders by May 9.

Londonderry. — Following, for Northern Ireland Hospitals Authority: (1) Building work; (2) mechanical engineering services; (3) electrical engineering services at Templemore Special Care Centre, Academy Road, Londonderry (formerly Upper Foyle College). Applications to the Secretary, N.I. Hospitals Authority, 27 Adelaide Street, Belfast, by May 7.

Ludlow, Salop.—Re-slating, repairs, installation of hot water systems and external painting of three flats at 10 Market Street, Craven Arms, for R.D.C. Documents from Engineer and Surveyor, Stone House, Corve Street, Ludlow. Tenders by May 9.

Ludlow, Salop. — External painting and decoration works to the following houses, for R.D.C.: Complete external decoration—Section (a) Four houses, Longville; (b) seven houses, Munslow; (c) eight houses, Culmington; (d) eight houses, Onibury; (f) 10 houses, Knowbury; (g) two houses, Abdon; (h) 12 houses, Coreley and Clee Hill. Partial decoration—(i) 14 houses, Cleobury Mortimer; (j) 24 houses, Craven Arms; (k) 10 houses, Wall-under-Heywood. Documents from Engineer and Surveyor, Stone House, Corve Street, Ludlow. Tenders by May 9.

Lurgan, Armagh. — Building contract and electrical, heating and plumbing subcontracts for the proposed new voluntary primary school at Aghacommon, Lurgan, for the Rev. James H. Boyd, P.P. Documents for the main building contract from P. J. Davidson, quantity surveyor, 16 High Street, Belfast, 1. Deposit £5 5s. Documents in respect of remainder from C. P. MacNally, chartered engineer, 143 Royal Avenue, Belfast. Deposit £3 3s. each. Tenders by May 23.

Luton, Beds.—Erection and completion of new kitchen and dining hall and minor alterations to existing school, Stopsley Primary School, for B.C. Documents from Borough Architect, Town Hall, Luton. Tenders by May 19.

Luton, Beds.—Supply and fixing of rubber and thermoplastic tiles, Luton Crematorium, for B.C. Documents from Borough Architect, Town Hall, Luton. Tenders by May 4.

Maesteg, Glam.—External repainting of 56 houses on the Brynheulog housing estate, Caerau, for U.D.C. Documents from Lewis W. Jones, engineer and surveyor, Council Offices, Maesteg. Deposit £2 2s. Tenders by May 9.

Maltby, Yorks.—Painting of 54 houses and 12 flats situated at Cliff Hills estate, for U.D.C. Documents from A. Carlin, housing manager, Council Offices, Rotherham Road, Maltby. Tenders by May 7.

Maltby, Yorks.—Improvement and repair of 16 houses, in Fisher Road and Bedford Street, for U.D.C. Documents from the Architect, Council Offices, Rotherham Road, Maltby. Tenders by May 7.

Manchester.—Design and construction of reinforced concrete foundations and structural framework (in reinforced concrete or steel) for the Northern Area Fire Station, Blackley, for City Council. Documents from City Architect, P.O. Box 488, Town Hall, Manchester. Tenders by May 20.

March, Cambs.—Improvmeent works to 93 houses at Eastwood Avenue, for U.D.C., comprising the installation of hot water systems, internal w.c.s, lavatory basins, sinks, additions to the electrical installation, etc. Contractors may submit tenders as follows: (a) for works required to the whole 93 houses (groups a and b); (b) for works required to 50 houses (group a); or (c) for works required to 43 houses (group b). Documents from W. S. Pickett, engineer and surveyor, Town Hall, March. Deposit £1 1s. Tenders by May 13.

Melton and Belvoir, Leics.—Painting of 299 dwellings which are situate in 21 different villages, and will be let as separate contracts, for R.D.C. Documents from the Engineer and Surveyor, Warwick Lodge, Dalby Road, Melton Mowbray. Tenders by May 21.

Middlesbrough, Yorks.—Erection of men's and women's conveniences in the town centre in single-storey traditional construction with superior finishes, for B.C. Documents from the Borough Engineer, Town Hall, Middlesbrough. Deposit £2 2s. Tenders by June 2.

Mirfield, Yorks.—Supply and erection of four metal-alloy plant houses and one brick-built boiler house, complete with central heating layout at central nursery, for U.D.C. Documents from the Parks Superintendent, Council Offices, Mirfield. Tenders by May 14.

Montgomeryshire.—Erection of two new cowhouses and milk rooms at Caerrhyd and Longlands, Hendomen, for C.C. Documents from D. A. Cresswell, county land agent, County Offices, Welshpool. Tenders by May 7.

Muckamore, Antrim. — Fabrication and erection of proposed apiary house at Greenmount Agricultural College, Muckamore, Co. Antrim, for Ministry of Finance. Documents from Room 103, Law Courts Building, Belfast, 1. Tenders by May 10.

Newcastle upon Tyne.—Interior painting, Workshops for the Adult Blind, for City Council. Applications to the City Estate and Property Surveyor, Town Hall, Newcastle upon Tyne, 1, by April 30. Tenders by May 14.

Newry, Down.—Alterations and adaptations to courtkeeper's quarters at County Courthouse, Trevor Hill, Newry, for Ministry of Finance. Documents from Room 103, Law Courts Building, Belfast, 1. Tenders by May 4.

Northampton. — Improvements to eight houses, Camp Hill, Budbrooke, for R.D.C., including mainly bathroom extensions and provision of hot water supply, brick barns, etc. Documents from the Surveyor, 1 Cheyne Walk, Northampton. Deposit £3 3s. Tenders by May 11.

Nuneaton, War. — Alterations and additions to existing premises in Pool Bank Street, Nuneaton, for office accommodation, for North-East Warwickshire Water Board. Documents from Powell and Large, chartered quantity surveyors, Broadgate House, Coventry. Deposit £2 2s. cheque, payable to Board. Tenders by May 18.

Old Fletton, Hunts.—External painting of 218 houses divided into six groups, for U.D.C. Documents from the Surveyor, Council Offices, Old Fletton. Tenders by May 20.

Peterborough. — Exterior decorating of the following, for C.C.: (1) Vawser Lodge, Thorpe

Road, Peterborough; (2) certain buildings, comprising part of St. John's Close, Thorpe Road, Peterborough. Documents from the County Surveyor, County Offices, Bridge Street, Peterborough. Deposit £2 2s. Tenders by May 5.

Peterborough.—Erection of public conveniences, at Walton recreation ground, for City Council. Documents from City Engineer and Surveyor, Town Hall, Peterborough. Deposit £2, payable to City Council. Tenders by May 9.

Peterborough.—Alteration and extensions at Cromwell Road County School, Beech Avenue, for Joint Education Board. The works include the following: (a) Conversion of three existing classrooms into new entrance hall, cloaks and toilets; (b) conversion of two existing cloakrooms into two classrooms; (c) demolition of existing playground lavatory blocks; (d) the erection of two new classrooms with toilet accommodation attached; (e) incidental works in connection with the above, including alterations to the existing hutted accommodation and new playground. Applications to Ruddle and Wilkinson, architects, Long Causeway Chambers, Peterborough. Deposit £2 2s., payable to the Board. Tenders by May 18.

Pontypool, Mon.—Partial removal of precast concrete rainwater gutter blocks and for the fixing of timber fascia and soffitts and aluminium rainwater gutters in lieu thereof, to dwellings at follows, for U.D.C.:: (1) 16; (2) 24; (3) 12; (4) 95; (5) 156; (6) 80; (7) 31; (8) 96; (9) 64; (10) 16; (11) 14. Contractors may tender for all or any of these contracts. Documents from J. H. Walker, housing manager, Town Hall, Pontypool. Deposit £2. Tenders by May 20.

Reading, Berks.—Erection of a building containing two flats and two garages, etc., in Corwen Road, Tilehurst, for B.C. Documents from the Borough Architect, Town Hall, Reading. Deposit £2 2s., cheques payable to Corporation. Tenders by May 9.

Reading, Berks.—External and internal redecoration of parts of Reading School, for B.C. Documents from the Borough Architect, Town Hall, Reading. Tenders by May 18.

Rochdale, Lancs.—Erection and completion of garages on various estates, for B.C. Documents from the Borough Surveyor, Town Hall, Rochdale. Tenders by May 20.

Ruddington, Notts.—Alterations and extensions to existing Parish Hall, for the Parish Council. Documents from Brewill Son and Nunn, architects, 64 Clarendon Street, Nottingham. Deposit £2 2s. Tenders by May 2.

***St. Albans, Herts.** — Extension to Verulamium Museum, for City Council. Deposit £2 2s. Tenders by May 18.

St. Germans, Corn.—Improvement works comprising the installation of bathrooms, hot water systems, and new drainage works to 12 houses at Greenbank Terrace, Callington, for R.D.C. Documents from the Surveyor, Council Offices, Lower Port View, Saltash. Deposit £2 2s. Tenders by May 4.

***St. Neots, Hunts.**—Construction of Three Shire water tower, for R.D.C. Deposit £5 5s. Tenders by May 17.

Samford, Suffolk.—External painting and repair of all or any of the undermentioned groups of houses, for R.D.C.: Brantham (24) Palfrey Heights; Chelmondiston (19) St. Andrew's Drive; Holbrook (16) Clench Road; Shotley (14) Kingsland; Washbrook (21) Fen View. Documents from the Housing Manager, Council Offices, 25 London Road, Ipswich. Tenders by May 7.

Scotland. — Supply and erection of the structural steelwork for Inverawe Power Station, near Taynuilt, Argyll, for North of Scotland Hydro-Electric Board. Documents from James Williamson and Partners, engineers, 219 St. Vincent Street, Glasgow, C.2. Deposit £2 2s.

***Shipley, Yorks.** — External painting of houses, for U.D.C. Deposit £2 2s. Tenders by May 6.

Southampton.—Erection of central health clinic at East Park Terrace, Southampton (phase I, three-storey block), for B.C. Written applications to Borough Architect, Civic Centre, Southampton, by April 23. Tenders by May 30.

Southport, Lancs.—Following, for B.C.: Internal and external painting to schools and kitchens; flag paving of playgrounds; rebuilding parts of boundary walls; approx. 127 lin. ft. precast concrete fencing; tarring and limewashing of school lavatories. Documents from Chief Education Officer, 99-105 Lord Street, Southport. Tenders by May 11.

Spilsby, Lincs. — Proposed chalets, South Beach, Ingoldmells, for R.D.C. Applications to the Engineer and Surveyor, Council Offices, Toynton Hall, Spilsby. Tenders by May 7.

Stockbridge, Yorks.—Exterior painting of 212 houses on the Stubbin Farm, Shay House and Ridal Avenue estates, for U.D.C. Documents from D. E. Robinson, surveyor, Town Hall, Stockbridge, Sheffield. Tenders by May 9.

Stourbridge, Worcs.—Erection of nine brick-built garages, the construction of hardstanding, drainage and incidental works at High Park housing estate, for B.C. Documents from H. W. Morris, borough engineer and surveyor, Council House, Stourbridge. Deposit £2 2s. Tenders by May 4.

Stroud, Glos.—Fitting of hot water tanks, sinks, lavatory basins and decorations, etc., at 1-10 inclusive, Mankley Road, Leonard Stanley, contract H/45, for R.D.C. Submit names to the Housing Manager, John Street, Stroud. Tenders by May 11.

Sunderland, Dur.—Alteration to caretaker's house, St. Mary's R.C. School, for B.C. Documents from Borough Architect, Grange House, Stockton Road, Sunderland. Tenders by May 13.

Tadcaster, Yorks.—Erection of a block of six brick garages with forecourt and drainage works at Auster Bank, for R.D.C. Documents from the Engineer and Surveyor, Council Offices, Tadcaster. Deposit £1 1s. Tenders by May 6.

Todmorden, Yorks.—External painting of 48 flats on the Hallroyd estate, for B.C. Documents from the Borough Engineer, Municipal Offices, Todmorden. Deposit £1. Tenders by May 9.

Tonbridge, Kent.—External painting of houses at the following sites, for R.D.C.: Hadlow — (1) Brookfields — 56 dwellings; (2) Hope Avenue—86 dwellings; (3) three sites—34 dwellings, Hildenborough; (4) Riding Park—54 dwellings; (5) Riding Lane and Mount Pleasant—46 dwellings; (6) six sites—46 dwellings. Documents from the Engineer and Surveyor, 48 Pembury Road, Tonbridge. Tenders by May 11.

Towcester, Northants.—Exterior painting of 108 houses and two bungalows at Ridgmont, Deanshanger, contract 9, for R.D.C. Documents from the Surveyor, 163 Watling Street West, Towcester. Tenders by May 12.

Towcester, Northants. — Modernisation of houses, for R.D.C.: (Contract 11) Twelve houses, 3-25 Puxley Road, Deanshanger—partial demolition of sculleries and w.c.s, rebuilding same with addition of store and fuel space and alterations to existing drainage, plastering of sculleries and bathrooms, provision of new grates with hot and cold water storage with supplies to new sink, bath and lavatory, including redecoration as necessary; (12) 12 houses, 10-32 Puxley Road, Deanshanger—partial demolition of sculleries and w.c.s, rebuilding same with addition of store and fuel spaces and alterations to existing drainage, plastering of sculleries and bathrooms, provision of new grates with hot and cold water storage with supplies to new sink, bath and lavatory, including redecorations as necessary; (13) 12 houses, 36-58 Folly Road, Deanshanger—partial demolition of sculleries and w.c.s, rebuilding same with addition of store and fuel space and alterations to existing drainage, plastering of sculleries and bathrooms, provision of new grates with hot and cold water storage with supplies to new sink, bath and lavatory, including redecoration as necessary; (14) 20 houses, Murswell Lane and Towcester Road, Silverstone—partial demolition of sculleries and fuel stores, rebuilding same with addition of store and w.c.s, with additions to drainage, building of brick outbuildings, provision of new grates with hot and cold water supplies to new sinks, baths, etc., including redecorations as necessary; (15) 20 houses, West End, Silverstone—plastering to bathrooms and provision of bath and lavatory basin, provision of new sink and draining boards and new grates with hot and cold water supplies and redecorations as necessary. Documents from the Surveyor, 163 Watling Street West, Towcester. Deposit £2 2s. each. Tenders by May 12.

Upton-upon-Severn, Worcs. — Modernisation of 25 houses at Cherry Orchard, for R.D.C. Documents from the Surveyor, Council Offices, Upton-upon-Severn. Deposit £2. Tenders by May 9.

Walsall, Staffs.—Erection of a clinic at Ross Road, Coalpool estate, for B.C. Documents from John H. Rendle, chartered architects, Lichfield Chambers, 1 Leicester Street, Walsall. Deposit £3 3s. Tenders by May 3.

Washington, Dur. — Repainting of 557 houses, for U.D.C. Documents from the Surveyor, Council Chambers, Washington. Tenders by May 16.

Wells, Som.—Erection of 11 lock-up garages and the carrying out of ancillary works thereto at St. Dunstan's Park, Baltons, Borough, for R.D.C. Documents from the Engineer and Surveyor, Council Offices, Wookey Hole Road, Wells. Deposit £2 2s. Tenders by May 9.

Wells, Som.—External painting of properties at the following housing estates, for R.D.C.: (Group 1) Walton—South Close—three houses and two bungalows; (2) Coxley—Harters Close—four flats; Wookey—Holmlea—four flats; North Wootton—Church View—four houses; (3) East Horrington—South View—eight houses; Chewton Mendip—Homefield—four houses; (4) Draycott—North Close—10 houses. Documents from the Engineer and Surveyor, Rural Council Offices, Wells. Deposit £2 2s. Tenders by May 17.

West Riding.—Internal and external painting at various schools in the Batley division, for C.C. Documents from the Divisional Education Officer, Education Office, Morley. Tenders by May 9.

West Riding.—Following works, for C.C.: (1) Part internal renovation of mansion and stable block and external renovation of mansion at Lady Mabel College, Wentworth Woodhouse; (2) rewiring of the electrical installation at Castleford New Fryston J. M. and I. School; (3) rewiring of the electrical installation at Conisbrough Denaby Main School; (4) rewiring of the electrical installation and installation of fire alarm system at Spenborough Heaton Avenue School; (5) rewiring of the electrical installation at Southowram J. M. and I. School; (6) improvements to caretaker's lodge at Meltham Row Edge Special School, Meltham (all trades); (7) internal and external redecoration of Bewerley Park School. Applications for (1) to the County Architect, Bishopgarth, Westfield Road, Wakefield; for (2) to the Divisional Architect, Bishopgarth, Westfield Road, Wakefield; for (3) to the Divisional Architect, Planet Road, Adwick-le-Street, near Doncaster; for (4), (5) and (6) to the Divisional Architect, Flint Street, Huddersfield; and for (7) to the Divisional Architect, Salisbury Buildings, Albert Street, Harrogate. All to May 2. Tenders by May 16.

West Riding.—Re-slating a portion of the roof of the Morley Gildersome Street Lane J.M. and I. School, for C.C. Documents from The Education Office, Queen Street, Morley. Tenders by May 9.

West Riding. — Repairs to roofs, windows, including pointing and ceiling renewals at Otley Prince Henry's Grammar School, for C.C. Documents from C. Anderson, clerk to the Governors, Education Office, Barcroft, Yeadon. Tenders by May 6.

West Riding.—External and part internal redecoration of the County Welfare Establishment, Sharow View, Ripon, for C.C. Applications to the Divisional Architect, Salisbury Buildings, Albert Street, Harrogate, by April 28. Tenders by May 16.

West Suffolk.—Painting and repairs, also various minor works during the schools summer holiday period at any of the schools listed below, for Co. E.C.: Primary Schools—Great Whelnetham Controlled Voluntary; Haverhill County; and Wickhambrook County. Secondary Schools—Beyton Modern; Bury St. Edmunds Silver Jubilee Modern (Boys and Girls); Clare Modern; Sudbury Grammar; and Sudbury High School for Girls. Exterior works may be caried out in term time. Applications to the County Architect, 13 Westgate Street, Bury St. Edmunds.

***Widnes, Lancs.**—Painting of school premises, for B.C. Tenders by June 6.

Wigan, Lancs. — Exterior painting of 58 traditional houses situate on the Gathurst Lane housing estate in the parish of Shevington, and eight Swedish timber houses on the Beech Avenue housing estate in the parish of Parbold, for R.D.C. Documents from the surveyor, J. Holding, 10 Bridgeman Terrace, Wigan. Tenders by May 9.

Wigston, Leics.—Extensions, additions and alterations, including a garage of 4,800 sq. ft. area, at the Newgate End Depot, for U.D.C. Documents from the office of the Engineer and Surveyor, Council Offices, Wigston. Deposit £5 5s. (cheques payable to U.D.C.). Tenders by May 2.

Worcester.—External redecoration of the following schools, for City Council: (Contract 1) Grammar School for Girls and caretaker's house; (2) Nunnery Wood Secondary School—F block only; (3) Ronkswood Junior School annexe (4) Pitmaston Junior School. Documents from the City Engineer and Surveyor, 22 Bridge Street, Worcester. Deposit £2 2s. (cheques payable to Corporation). Tenders by May 9.

York.—Erection of a branch library at Fifth Avenue, for City Council. Documents from E. Firth, city architect, 8 St. Leonard's Place, York Deposit £3 (cheques payable to Corporation). Tenders by May 11.

CLOTHING AND TEXTILES

Argyllshire. — Supply of police uniform clothing for police force for the year 1960-61 as follows, for C.C.: (a) Jackets, trousers, waterproof coats, breeches, caps, skirts and leather leggings; (b) shirts, collars, ties, gloves (leather and woollen) and stockings. Applications to the Chief Constable, Lochgilphead, by April 30.

Barrow-in-Furness, Lancs.—Supply of police uniform clothing during the period ending March 31, 1961, for B.C. Documents from the Chief Constable, Central Police Headquarters, Barrow-in-Furness. Tenders by May 28.

Bury, Lancs.—Supply, during 1960-61, of uniform clothing for members of the fire brigade, for B.C.: Fire tunics, caps, officers' uniform jackets and trousers, shirts and collars, patrol jackets and trousers, overall jackets, raincoats. Documents from Chief Fire Officer, Fire Station, Bury. Tenders by May 21.

***Dorset.**—Supply of police clothing, for C.C. Tenders by May 9.

Hertfordshire.—Supply of uniforms for the Hertfordshire ambulance brigade, for C.C. Documents from the County Purchasing Officer, The Old Rectory, Hatfield. Tenders by May 4.

Salford, Lancs.—Supply of the following, for City Council: Greatcoats, jackets, trousers, skirts, caps, helmets, shirts, and collars, ties, leather gloves, and nylon stockings for the police force; and caps, waterproof coats, while cotton dust coats, and rubber boots for the school crossing patrol. Documents from the Chief Constable, P.O. Box 5, Salford, 5. Tenders by May 12.

Stockport, Ches.—Supply of school crossing patrol clothing as follows, for B.C.: 35 s.b. white waterproof coats in three stock sizes; 35 pairs navy blue waterproof leggings; 50 black waterproof cap covers of various sizes; 20 navy blue peaked caps of various sizes; 40 white twill dustcoats; 70 pairs white knitted woollen gloves. Documents from Chief Constable, Central Police Station, Edward Street, Stockport. Tenders by May 18.

Wakefield, Yorks.—Supply of uniform clothing, including raincoats, mackintoshes, shirts, collars, ties, helmets, caps and gloves for members of the City Police Force, for City Council. Documents from the Chief Constable, City Police Office, Cliff Parade, Wakefield. Tenders by May 20.

Wrexham, Denbighs. — The supply of 130 boiler suits, plain style, half belt, blue drill in various sizes, ranging from 36in. to 48in., for R.D.C. Tenders in sealed envelopes endorsed "Protective clothing," to Trevor L. Williams, clerk and solicitor, Imperial Buildings, Regent Street, Wrexham, by May 9.

DEMOLITION

Brighouse, Yorks.—Demolition and removal of eight cottages situated 144 to 158 Elland Road, Brookfoot, Brighouse. Documents from Samuel Wilkinson and Sons, Ltd., Savile House, Elland.

Cambridgeshire. — Contract 6010—demolition of the Touchwood Cafe on the Cambridge-Newmarket (A.45) road at Bottisham, for C.C. The cafe and outbuildings are to be demolished and completely removed, all materials to become the property of the contractor. Documents from the County Surveyor, Shire Hall, Cambridge. Tenders by May 9.

Malden and Coombe, Surrey. — Demolition of old Army huts, Blagdon Road, New Malden, for B.C. Applications to the borough engineer, John Apse, Municipal Offices, New Malden, Surrey

***Surbiton, Surrey.**—Demolition of 14 South Place, for B.C. Tenders by May 13.

ELECTRICAL

Belfast. — Electrical rewiring at Shankill Road Y.M.C.A., Belfast, for National Council of Y.M.C.A.'s Committee. Documents from Lewis, Baxter and Associates, 1 University Street, Belfast. Deposit £2 2s., by cheque. Tenders by May 9.

Fifeshire.—Electrical work at Pittenweem School, Dairsie School, St. Kenneth's R.C. School, Beath High School, and Cowdenbeath Technical College, for C.C. Applications to the County Clerk, Cupar, Fife, by April 30.

Luton, Beds.—Rewiring of 90 houses Corncastle Road, Hillborough Road and Farley Hill, for B.C. Documents from Borough Architect, Town Hall, Luton. Tenders by May 20.

Omagh, Tyrone.—Electrical installation in County courthouse, Omagh, for Ministry of Finance. Documents from Room 103, Law Courts Building, Belfast, 1. Tenders by May 16.

Omagh.—Rewiring of the auditorium, stage and dressing rooms of the town hall, for U.D.C. The contract includes the rewiring in m.i.c.s. cable and the supply and installation of all necessary switchgear and lighting fittings. Documents from John McGale, town clerk, Town Hall, Omagh. Deposit £2 2s. Tenders by May 5.

Sunderland, Dur.—Electrical installation, Southmoor Technical School extensions, for B.C. Documents from Borough Architect, Grange House, Stockton Road, Sunderland. Tenders by May 13.

FENCING

Crayford, Kent.—Supply and erection of approximately 140yd. concrete panel fencing at the park depot, Slades Green, for U.D.C. Documents from the Engineer and Surveyor, Town Hall, Crayford. Tenders by May 6.

***Harrow, Middx.**—Fencing and accommodation works, for B.C. Deposit £2. Tenders by May 10.

Harrow, Middx.—Replacement of fences, front gates and posts, and provision of close boarded screens on the Elstree Hill estate, Elstree, Herts, for B.C. Documents from the Borough Engineer and Surveyor, Council Offices, Cottesmore, 48 Uxbridge Road, Stanmore, Middx. Deposit £2, cheque payable to Corporation. Tenders by May 17.

Inverness.—Erection of approximately 800 lin. yd. of chain link fence at the Longman refuse tip, for B.C. Documents from Burgh Surveyor, Town House, Inverness. Tenders by May 7.

Richmond, Surrey.—Renewal and repair of chain link fence surrounds and gates to two hard and 10 grass tennis courts at the Old Deer Park, for B.C. Documents from the Parks Superintendent, Terrace Gardens, Richmond. Tenders by May 6.

West Riding.—Supply and erection of approximately 540 lin. yd. of reinforced concrete post and two rail fence with 42 pairs of gate posts and 35 lattice gates complete with all necessary fittings at Bawtry, for C.C. Documents from the office of the Assistant County Surveyor, West Riding County Council, Area and Divisional Offices, Station Road, Doncaster. Deposit £1, cheques payable to West Riding Treasurer. Tenders by May 11.

GAS AND WATER SUPPLY

Ballymoney, Antrim.—Regional water supply scheme, primary distribution mains as follows, for R.D.C.: (Contract 12c) Approximately 8¾ miles of flexible jointed spun-iron pipes, 10in. to 3in. in diameter; (12d) approximately 7¼ miles of flexible jointed spun-iron pipes, 9in. to 3in. in diameter; (14a) approximately 9¼ miles of flexible jointed spun-iron pipes, 9in. to 3in. in diameter; (14b) approximately 8½ miles of flexible jointed spun-iron pipes, 7in. to 3in. in diameter. Documents from Waterhouse and Rounthwaite, consulting engineers, Friends' Provident Buildings, 58 Howard Street, Belfast, 1, and 165 Westmorland Road, Newcastle upon Tyne, 4. Deposit £5 5s. each. Plans also seen at the Council Offices, Riada House, Charles Street, Ballymoney. Tenders by May 30.

***Blyth, Suffolk.**—Benhall water supply scheme for Sizewell Atomic Power Station, for R.D.C. Deposit £10. Tenders by May 16.

Depwade, Norfolk.—Supply and laying of water main extensions as follows, for R.D.C.: (a) Approximately 790yd. of 3in. diameter spun-iron main, and incidental work, at Fen Street, Roydon; (b) approximately 780yd. of up to 1½in. diameter super-polythene main, and incidental works, at Gilderswood Lane, Forncett St. Peter. Documents from the Engineer, Council Depot, Long Stratton, Norwich. Deposit £2. Tenders by May 4.

Dungannon, Tyrone. — Water extensions, contract 12, for R.D.C., comprising supplying and laying of 3in. and 2in. diameter spun-iron and asbestos-cement water mains to a total approximate length of 13½ miles. Documents from the offices of the Dungannon Rural District Council, Dungannon. Deposit £3 3s. Tenders by May 12

***Fort William, Inverness.**—Glen Nevis water scheme, contract 2, for B.C. Deposit £4 4s. Tenders by May 18.

Harrow, Middx.—Renewal of existing lead rising mains and cold water services, including stop valves and all ancillary works thereto to dwellings on the Berridge, Wolverton Road (Stanmore) and Woodlands Drive estates, for B.C. The work will be let in three separate contracts. Documents from the Borough Engineer and Surveyor, Council Offices, Cottesmore, 48 Uxbridge Road, Stanmore. Deposit £2. Tenders by May 17.

Londonderry.—Supplying and laying of approx. 4,567 lin. yd. 6in. spun-iron pipe, 94 lin. yd. 4in. a.c. pipe and 952 lin. yd. 3in. dia. a.c. pipe, together with ancillary works, from Glendermott School to Legaghory, for R.D.C. Documents from the office of the Londonderry Rural District Council or Glendermott Road, Londonderry, or W. D. R. and R. T. Taggart, consulting engineers, 13 College Gardens, Belfast, 9. Deposit £5 5s., cheques payable to R.D.C. Tenders by May 6.

Londonderry.—Supplying and laying of approx. 3,750 lin. yd. 8in. dia. a.c. pipe, 3,525 lin. yd. 6in. dia. a.c. pipe, and 6,600 lin. yd. 4in. dia. a.c. pipe, together with ancillary works, between Killaloo and Park, contract 3, for R.D.C. Documents from the office of the Londonderry Rural District Council, Glendermott Road, Londonderry, or W. D. R. and R. T. Taggart, consulting engineers, 13 College Gardens, Belfast, 9. Deposit £5 5s., cheques payable to R.D.C. Tenders by May 6.

Manchester.—Manufacture, supply and installation at Clayton Bridge, of one submersible borehole pump, capable of raising 10,000 g.p.h., together with pipework valves, etc., contract M.D.1, for City Council. Documents from the Secretary, Waterworks Offices, Town Hall, Manchester, 2. Tenders by May 16.

***Pontardawe, Glam.** — Two water supply schemes, for R.D.C. Deposit £5 each. Tenders by May 11.

***Saffron Walden, Essex.**—Laying of water mains, for R.D.C. Tenders by May 14.

Upton-upon-Severn, Worcs. — Water main extension, for R.D.C., including the laying of approx. 2,100yd. of 3in. spun-iron main at Gilberts End, Hanley Castle. Documents from the Surveyor, Council Offices, Upton-upon-Severn. Deposit £2. Tenders by May 9.

***Wolverhampton.**—Laying about eight miles of pipeline, for B.C. Apply by May 2. Deposit £3.

HARBOURS, PIERS AND SEA DEFENCE WORKS

***Worthing, Sussex.**—Construction of timber groynes, for B.C. Deposit £2 2s. Tenders by May 9.

HEATING AND VENTILATING

Birmingham.—Installation of hot water (backboiler) systems, and wash-hand basins, to 1,000 non-parlour type houses situated in the Pype Hayes and Acocks Green areas, for City Council. Contractors may tender for all or groups of 250 installations. Documents from J. P. Macey, housing manager, Housing management Department, Bush House, Broad Street, Birmingham, 1. Deposit £2 2s. Tenders by May 10.

***Bootle, Lancs.**—Town Hall central heating scheme, stage II, for B.C. Tenders by May 23.

Bury, Lancs.—Installations of automatic stoker at public swimming baths, for B.C. Documents from Borough Engineer, Town Hall, Bury. Tenders by May 3.

Chelmsford, Essex.—Erection of a two-storey block of flats at Hunts Drive, in the Parish of Writtle, for R.D.C., comprising two self-contained units for old persons on the ground floor with two two-bedroomed flats on the first floor. Documents from the Council Offices, (Room 27), New London Road, Chelmsford. Deposit £2, cheques payable to R.D.C. Tenders by May 16.

Corrardaghy, Fermanagh.—Following works at New Voluntary Primary School, Corrardaghy: (a) Low pressure hot water installation; (b) Electrical. Documents from Sean MacCann, Clones Road, Monaghan. Deposit £3 each. Tenders by May 7.

Sunderland, Dur.—Renewing heating boilers in several schools, for B.C. Documents from the Borough Engineer, 27 Fawcett Street, Sunderland. Deposit £2 2s., cheques payable to Corporation. Tenders by May 16.

Sunderland, Dur.—Heating, etc., installation, Monkwearmouth community centre, for B.C. Documents from Borough Architect, Grange House, Stockton Road, Sunderland. Tenders by May 13.

Sunderland, Dur. — Installation of central heating apparatus in central library extensions, for B.C. Documents from Borough Architect, Grange House, Stockton Road, Sunderland. Tenders by May 6.

HOUSING SCHEMES

Adwick-le-Street, Yorks.—Erection of a block of four shops with flats, also 16 flats at Lawn Avenue. Woodlands, including drainage and other works, for U.D.C. Applications to W. S. Ellis, engineer and surveyor, Council Offices, Adwick-le-Street, by April 30. Deposit £2 2s. Tenders by May 14.

Airdrie, Lanarks.—Erection complete of flats at 2/52 Aitken Street, Airdrie, and shops and flats at the junction of Connor Street and Forrest Street, for B.C. Applications to the Town Clerk, Municipal Buildings, Airdrie.

Barnsley, Yorks.—Erection and completion of houses as follows, for B.C.: Two pairs semi-detached houses, Honeywell Grove; one detached house, Moxon Square, Ardsley. Documents from the Borough Engineer, Town Hall, Barnsley. Deposit £2 2s. Tenders by May 16.

Brentwood, Essex.—Erection of 72 flats and eight houses at Hutton estate, for U.D.C. Documents from Engineer and Surveyor, Council Offices, Brentwood. Deposit £2 2s. Tenders by May 25.

Devonshire.—Erection of four police houses at Crediton, for C.C. Applications to the County Architect, 97 Heavitree Road, Exeter, by May 2. Deposit £3 3s. (cheque payable to C.C.).

Ealing.—Sixteen flats at Lyncroft Gardens, London, W.13, for B.C. Documents from the Borough Surveyor, Town Hall, Ealing, London, W.5. Deposit £5. Tenders by May 20.

*Edinburgh. — Rebuilding of temporary housing areas, for City Council. Apply by May 2.

*Ellesmere Port, Ches.—Forty-three traditional houses and two brick garages, contract 291, for B.C. Tenders by May 23.

*Ellesmere Port, Ches.—Three-storey flats, contract 260, for B.C. Tenders by May 23.

Gravesend, Kent.—Erection of 28 single-bedroom two-storey flats in seven blocks, and six one-bedroom bungalows in three pairs, for B.C. The dwellings are to be erected on four widely scattered sites in the Borough, with not more than 16 dwellings on any one site. Documents from Borough Engineer and Surveyor, 6 Woodville Terrace, Gravesend, on or from April 29. Tenders by May 27.

*Hartlepool, Dur.—Erection of proprietary-type houses at King Oswy Drive, for B.C. Tenders by June 4.

Hemel Hempstead, Herts.—Fifteen houses and 20 lock-up garages at Wheelers Lane, for B.C. Documents from A. H. Turner, borough engineer, High Street, Hemel Hempstead. Tenders by May 24.

Hemel Hempstead, Herts. — Beechfield scheme 7, for B.C., comprising 12 Homeville two-storey flats and six garages on the site of the old Anchor public house. Documents from A. H. Turner, borough engineer and surveyor, High Street, Hemel Hempstead. Tenders by May 24.

Holywell, Flints.—Erection of 50 houses, complete with paths, fences, branch drains and branch water mains, at Greenfield Hall estate, for U.D.C. Documents from W Isherwood, engineer and surveyor, Town Hall, Holywell. Deposit £2. Plans also seen at the office of A. W. West, quantity surveyor, Westminster Bank Chambers, Church Street, Wrexham. Tenders by June 4.

Hoyland, Yorks.—Sixteen two-bedroomed houses together with external services, roadworks, at Greenfield estate, for U.D.C. Documents from the Engineer and Surveyor, Town Hall, Hoyland. Tenders by May 9.

Huddersfield, Yorks.—Electrical installation, including under floor electrical heating, for two blocks of 11-storey flats, Northgate/Southgate, for B.C. Documents from the Borough Architect's Office, High Street Buildings, Huddersfield. Tenders by May 13.

Huyton - with - Roby, Lancs.—Forty - three three-bedroom houses, 150 three-storey flats, 66 garages, at Mosscroft Farm estate, (stage 6), for U.D.C. Applications to the Architect, Grasscroft, Archway Road, Huyton, by May 14. Deposit £2 2s.

Huntingdon.—Six bungalows at Great Stukeley, for R.D.C. Documents from J. S. Simms, surveyor, Montagu House, Huntingdon. Deposit £2 2s. Tenders by May 18.

Kingston-upon-Thames, Surrey. — Erection of 11 old people's dwellings at Cambridge Gardens, for B.C. Applications to the Borough Surveyor, Guildhall, Kingston, by May 2.

*Liverpool. — Standard 11-storey tower blocks of flats on various sites, for City Council. Tenders by May 9.

North Kesteven, Lincs.—Six one-bedroom bungalows at Potterhanworth, for R.D.C. Documents from the Council's Surveyor, Flaxengate, Lincoln. Deposit 2 2s. Tenders by May 6.

Oxford.—Following building work, all in two-storey traditional brick construction, for City Council: (1) Block of eight small flats at Blackbird Leys estate; (2) four pairs of five and two-bedroom houses at Blackbird Leys estate; (3) pair of police houses at First Turn, Wolvercote; (4) pair of police houses at Blackbird Leys estate; (5) two pairs o police houses, with garage and police box, at Horspath Road. Applications to City Architect and Planning Officer, Town Hall, Oxford, by May 6.

Pembroke, Pembs.—Following, for R.D.C.: (a) Angle site one—erection of one pair of bungalows, type O.P. 7a, together with all necessary works complete; (b) Angle site two —erection of two pairs of bungalows, type O.P. 7a, together with all siteworks complete. Documents from J. Owen Parry and Lewis, architects, Ammanford, or Frederic S. Jones, clerk of the Council, Tudor House, Pembroke. Deposit £3 3s. Tenders by May 11.

Portsmouth. — Modernisation of pre-war blocks of flats, for City Council. Applications to the Director of Housing, 1 Clarence Parade, Southsea, by May 7. Deposit £1.

*Reigate, Surrey.—Maisonnettes at The Dome estate, for B.C. Deposit £2 2s. Tenders by May 19.

Salisbury and Wilton, Wilts. — Erection of three bungalows in the parish of Winterslow, for R.D.C. The work includes fencing, paths, water supply, drains and septic tank. Documents from C. S. Brown, clerk of the Council, Council Offices, 26 Endless Street, Salisbury. Plans seen at the offices of Bothams and Brown, architects, 32 Chipper Lane, Salisbury. Deposit £2 2s. Tenders by May 16.

Sunderland, Dur.—Erection of caretaker's house, Fulwell School, for B.C. Documents from Borough Architect, Grange House, Stockton Road, Sunderland. Tenders by May 13.

Urmston, Lancs.—Erection of 28 aged persons bungalows at Blair Avenue, Irlam Road, Flixton, for U.D.C. Documents from the Surveyor's Department, Crofts Bank Road, Urmston. Tenders by May 16.

Wellingborough, Northants.—Four one-bedroom flats in one two-storey block, eight garages, external services and siteworks at Charnwood, The Avenue, for U.D.C. Applications to R. Kilby, engineer and surveyor, Council Offices, Swanspool, Wellingborough. Deposit £2 2s. Tenders by May 16.

Wells, Som.—Erection of a block of 11 flatlets and two pairs of bungalows, together with incidental works, on the site at Vicarage Road, Wookey, for R.D.C. Documents from the office of the Engineer and Surveyor, Wookey Hole Road, Wells. Deposit £3 3s. Tenders by May 17.

Whitchurch, Salop. — Erection of pair of semi-detached three-bedroom houses with attached outbuildings at Bath Street, for U.D.C. Documents from the Engineer and Surveyor, Pauls Moss, Dodington, Whitchurch. Deposit £2 2s., cheque payable to U.D.C. Tenders by May 16.

*Wolverhampton.—Erection of dwellings, for B.C. Apply by May 2. Deposit £2 2s.

Wycombe, Bucks.—Erection of a pair of semi-detached houses (type U.C.3) at Little Marlow, for R.D.C. Documents from the Engineer and Surveyor, 8 and 9 Easton Street, High Wycombe. Tenders by May 7.

MATERIALS AND SUPPLIES

Aberdeen.—Supply of the following, for City Council: Derv motor spirit and residual fuel/gas oils, required by the Town Council's Public Service and Commercial Vehicles, stationary plant and heating, for the period from July 1, 1960, to June 30, 1961. The approximate requirements are 920,000 gallons Derv, 140,000 gallons motor spirit, 320,000 gallons residual fuel oil and 35,000 gallons gas oil. Delivery will be required to points within the City boundary, usually in consignments of 2,000 gallons for Derv and in 500 gallons for motor spirit and residual fuel/gas oils. Tenders enclosed in envelopes endorsed "Tenders for Derv, Motor Spirit and Residual Fuel/Gas Oils," to the General Manager, Transport Department, 2 Marischal Street, Aberdeen, by May 9.

Ashton-in-Makerfield, Lancs.—Supply and fitting of a carpet in the Council chamber, for U.D.C. Documents from the Surveyor, Town Hall, Ashton-in-Makerfield. Tenders by May 6.

Blackpool, Lancs.—Supply of approx. 50,000 Staffordshire Blue Pressed bricks, for Fylde Water Board. Documents from the Engineer to the Board, Sefton Street, Blackpool. Tenders by May 5.

Great Yarmouth.—Supply of materials to be used in connection with the installation of hot waer services to pre-war council houses, for B.C. Documents from the Housing Manager, 11 Hall Quay, Great Yarmouth. Tenders by May 9.

Inverness.—Supply of the following to the Inverness Hospitals for the period June 1, 1960, to May 31, 1961, for Board of Management: Earthenware; glassware; floor polish; soaps; paints; blankets; uniforms—nursing and domestic; uniforms—male; uniforms—female; patients' clothing—male; patients' clothing—female; linen and drapery. Documents from the Secretary and Treasurer of the Board, 14 Ardross Street, Inverness. Tenders by May 12.

Inverness-shire.—Supply and application of roadstone and bituminous macadam, etc., for 12 months to May 15, 1961, for C.C. Documents from County Clerk, County Buildings, Inverness. Tenders by May 4.

*Kirkby, Lancs.—Supply of tubular metal market stalls, for U.D.C. Apply within 10 days.

*Lewisham.—Supply of refuse storage containers, for B.C. Tenders by May 30.

Manchester.—Supply of diesel oil, heating oil, and Creosote oil during the 12 months ending June 30, 1961, for City Council. Documents from the General Manager, Rivers Department, P.O. Box 488, Town Hall, Manchester, 2. Tenders by May 9.

Welwyn Garden City, Herts.—Supply of the following housing materials, for U.D.C.: (a) 200 tiled surrounds; (b) 200 backboiler units; (c) 200 Finch throat units. Documents from the Housing Manager, Council Offices, Welwyn Garden City. Tenders by May 16.

West Suffolk.—Supply of the following for the 12 months commencing August 1, 1960, for Co. E.C.: Fuel oil; sweeping compounds and cleaning materials; toilet rolls. Documents from R. F. A. Carter, chief education officer, Manor House, Bury St. Edmunds. Tenders by May 9.

PLANT AND MECHANICAL TRANSPORT

Armagh.—Supply and delivery, for R.D.C., of one concrete mixer, half-bag size, four-stroke petrol engine, suitable for fast highway towing. Brakes, cable rods, etc., to be enclosed. Delivery date must be stated. Sealed tenders, endorsed "Concrete Mixer," to J. A. Dawson, clerk of the Council, Rural District Council Offices, Tower Hill, Armagh, by noon, May 9.

Basildon, Essex. — Supply of all or any of the following, for U.D.C.: Ferguson tractor; David Brown Hurricane grass-cutter; Wallis and Steevens 2-ton roller; Bedford 3-ton lorry; Fordson 15cwt. pick-up truck; Fordson 10cwt. van; Eezion low-load tailer; Ingersoll-Rand single-tool compressor, mounted on two-wheeled trailer. Documents from the Engineer and Surveyor, Council Offices, 88 Town Square, Basildon. Tenders by May 6.

*Bury, Lancs.—Supply of portable air compressor, for B.C. Tenders by May 11.

Dagenham, Essex. — Supply of one vehicle washing plant and a steam cleaning unit for use at the transport workshops, for B.C. Documents from the Borough Surveyor, Civic Centre Dagenham. Tenders by May 14.

East Suffolk. — Hire of a tower crane for use at Aldeburgh, Suffolk, for an estimated period of three months, for East Suffolk and Norfolk River Board. The jib is required to have a lifting capacity of approximately one ton at approximately 100ft. radius at a low level. Documents from the Board's chief engineer, K. E. Cotton, The Cedars, Albemarle Road, Norwich. Tenders by May 12.

Gloucestershire.—Construction of five light alloy single dropside three-way tipping bodies, 5 cu. yd. capacity, for C.C. Documents from the County Surveyor, Quay Street, Gloucester. Tenders by May 20.

Magherafelt, Londonderry. — Following, for R.D.C.: Supply and delivery to the Council's store in Magherafelt of a diesel engine-driven air compressor of 70 c.f.m. output, or thereabouts, compressor and engine to be mounted on a chassis with pneumatic tyred road wheels, all to M.T. requirements. Tenders on the tenderer's own business paper, enclosed in sealed envelopes endorsed "Tender for compressor," to W. J. McKinney, clerk, Council Offices, Magherafelt, by 5 p.m., May 4. Any further information may be had from W. and M. Given, the Council's consulting engineers, Coleraine.

Newry, Down.—Supply and delivery to Newry of an oil-fired tar boiler, for U.D.C., the boiler to be of 50/60-gallon capacity, fitted with hand-spray attachment and solid rubber tyres. Full descriptive particulars and delivery date to be supplied with tenders, which should be suitably endorsed and lodged with G. Cronin, town clerk, Council Offices, Town Hall, Newry, by 5.30 p.m., May 5.

*Orpington, Kent.—Supply of vehicles and plant, for U.D.C. Tenders by May 7.

Prestwich, Lancs. — Supply and delivery of one Lewin mechanical orderly, for B.C. Documents from the Borough Engineer, Town Hall, Prestwich. Tenders by May 4.

Sheffield, Yorks. — Blackburn Meadows works reconstruction and extensions, contract B.M.(R.S.)28, for City Council. Supply of a 3-ton electrically powered single girder crane for a span of 38ft. Applications, in writing, to Jas. H. Edmondson, general manager and engineer, Sewage Disposal Department, Wincobank, Sheffield, 9. Tenders by May 13.

Stoke-on-Trent, Staffs.—Supply of the following vehicles, for City Council: Bedford—one 25cwt. Hawson van; one 10/12cwt. van; one P.S.V. Utilabus; six 6-ton S.W.B. diesel tippers; one 30cwt van; one 3-ton chassis; one Austin 5cwt. van and one pick-up; one Ford 12-seater van; two Triumph TR3 cars; one Standard 6cwt delivery van; one Fordson Major tractor; one David Brown tractor; three Velocette motor-cycles; two Lambretta motor scooters. Documents from the Transport Manager, Booth Street, Stoke-on-Trent. Tenders by May 4.

Tyrone.—Following, for C.C.: (a) Five Bedford lorries; (b) one Bedford light van; (c) one Massey-Ferguson 35 tractor. Documents from the Repair Depot, Dungannon. Tenders by May 12.

Wisbech, I. of E. — Supply of motor mowers, for B.C. Mowers to be offered on part exchange basis. Documents from the Borough Engineer, Church Terrace, Wisbech. Tenders by May 7.

Wrexham, Denbighs.—Following, for R.D.C.: Supply and delivery of one Karrier 18 cu. yd. dual tip refuse collector with double cab, 11ft. 9in. wheel base on 700 x 20 10-ply tyres, including spare wheel and tools as supplied by the manufacturers, fitted with diesel engine, rear riding step, flashing indicators and heater, painted in the standard colour (Clarendon grey) and lettered to the Council's requirements. Tenders, with full particulars of the vehicle, and stating delivery period, in a sealed

envelope endorsed "Refuse collecting vehicle," to Trevor L. Williams, clerk and solicitor, Imperial Buildings, Regent Street, Wrexham, by noon, May 9.

PLAYING FIELDS, PARKS, ETC.

Altrincham, Ches.—Resurfacing the two non-attention tennis courts at Riddings Road and the supply and erection of necessary chain link fencing to existing corner and intermediate posts, for B.C. Documents from the Parks Superintendent, John Leigh Park, Oldfield Road, Altrincham. Tenders by May 7.

Bournemouth, Hants.—Two new hard all-weather tennis courts at East Howe Secondary School Playing Fields, Hadow Road, Bournemouth, for B.C. Documents from the Borough Architect (Room 106), Town Hall, Bournemouth. Deposit £1 1s. Tenders by May 9.

Burntwood, Staffs. — Following works, for Parish Council: Tar-paving of footpaths of parks in the parish; wrought-iron fencing—provision, installation and repair at Chase Terrace Park; children's playground equipment—supply and installation. Documents from F. H. Attenborough, clerk to the Burntwood Parish Council, 5 Walmer Meadow, Aldridge, Walsall. Tenders by May 3.

***Farnham, Surrey.** — Resurfacing of tennis courts, for U.D.C. Deposit £1 1s. Tenders by May 13.

***Mynyddislwyn, Mon.**—Playing field works, for U.D.C. Deposit £3 3s. Tenders by May 16.

Salford, Lancs.—Development of playing fields at St. Lawrence Roman Catholic Secondary Modern School, Weaste Lane, for City Council. Applications to W. and J. B. Ellis, chartered architects, Barclays Bank Buildings, Hardshaw Street, St. Helens, by 10.30 a.m., May 4. Deposit £2 2s., payable to Education Committee.

***Swansea.**—Playing fields at Penlan Multilateral School, for B.C. Deposit £2. Tenders by May 20.

ROADS, BRIDGES AND SITE WORKS

Bolsover, Derbys.—Removal of brick and concrete debris from Hornscroft entrenchment, for U.D.C. Documents from the Surveyor, Council Offices, Bolsover.

***Boston, Lincs.**—Surface dressing, for B.C. Tenders by May 9.

***Brentwood, Essex.**—Making-up of Uplands Road, for U.D.C. Deposit £1 1s. Tenders by May 20.

Bridgend, Glam.—Advance preparation of site 3, Brynhyfryd estate, for U.D.C., including the construction of ballast road, approximately 200yd. length, surface water sewers and soil sewers. Documents from the office of the Engineer and Surveyor, Council Offices, Glan Ogwr, Bridgend. Deposit £2 2s. Tenders by May 7.

***Buckinghamshire.**—Road works, Lathbury Village, for C.C. Deposit £2. Tenders by May 16.

Buckinghamshire. — Strengthening Marlow suspension bridge, including renewing the suspension chains and deck while maintaining traffic crossing the bridge, for C.C. Work to be carried out in the autumn. Applications, giving particulars of experience in carrying out bridgeworks of a similar nature, and evidence of ability to execute such works piecemeal with minimum interference to vehicular traffic crossing the bridge continuously in single-line working, to the County Surveyor, County Offices, Aylesbury, by May 12.

Bury, Lancs.—Supply, delivery and laying of approx. 6,800 sq. yd. of hot rolled asphalt surfacing, for B.C. Documents from Borough Engineer, Town Hall, Bury. Tenders by May 11.

Carmarthenshire.—Widening at Commissioners Bridge, Kidwelly, under tidal conditions, for C.C., including the construction of mass concrete abutments and piers, with wing and training walls in concrete, partly masonry faced, and reinforced concrete deck slabs over five spans each 10ft. wide. Foundation work includes the driving, part burning off, and extraction of steel sheet piling. The contract also includes for the supply and erection of five auto cycloidal flap gates, together with the widening of the existing approach roads for a distance of approximately 220 lin. yd. to a highway width of 36ft. Documents from J. L. Richards, county engineer and surveyor, Roads and Bridges Department, County Hall, Carmarthen. Deposit £2. Tenders by May 14.

Castle Ward, Northumb.—Erection of brick boundary walls, concrete drives and paths and other ancillary works at Cochrane Terrace, Dinnington, for R.D.C. Documents from G. E. Dimmack, Council Offices, Ponteland. Deposit £2 2s. Tenders by May 17.

***Chesterton, Cambs.**—Footpaths, etc., at Teversham housing site, for R.D.C. Deposit £2 2s. Tenders by May 17.

***City of Ely.**—Surface dressing, for U.D.C. Tenders by May 6.

Cwmbran, Mon.—Reconstruction of footways, Abbey Road, for U.D.C., comprising taking up about 230 lin. yd. stone kerb and 345 sq. yd. stone paving, providing and laying 240 lin. yd. of new concrete kerb and 370 sq. yd. of new concrete paving, together with incidental works. Documents from the Surveyor, Council Offices, Cwmbran. Deposit £3 3s. Tenders by May 16.

***Dumfriesshire.**—Final surfacing to A.74, for C.C. Tenders by May 9.

***Epsom and Ewell, Surrey.** — Footpath repairs, 1960, for B.C. Deposit £2 2s. Tenders by May 16.

***Fareham, Hants.**—Private street works, for U.D.C. Deposit £2. Tenders by May 26.

***Faversham, Kent.**—Site works at Lower Road estate, for B.C. Tenders by May 30.

***Flintshire.**—Reconstruction of High Street, Connah's Quay, for C.C. Deposit £3 3s. Tenders by May 17.

***Hale, Ches.**—Tarspraying, for U.D.C. Tenders by May 6.

***Hartlepool, Dur.** — Construction of roads, sewers and footpaths, for B.C. Deposit £2. Tenders by May 23.

Hazel Grove and Bramhall, Ches.—Making-up and completion of Cavendish Road (part of), Hazel Grove, for U.D.C. Documents from the office of the Engineer and Surveyor, Council House, Hazel Grove. Deposit £2 2s. Tenders by May 16.

Holborn.—Supply, delivery and maintenance of approx. 750 automatic parking meters and posts, for B.C., comprising the fixing of meters to posts after erection by Council; supply of hoods; spare mechanisms and other ancillary parking meter equipment. Documents from the Borough Engineer and Surveyor, Town Hall, High Holborn, London, W.C.1. Tenders by May 18.

Hull.—Reconstruction of Brooklyn Terrace, Worthing Street, and the back road at the rear of 798-812 Beverley Road, for City Council, comprising approx. 400 sq. yd. of concrete paving, together with drainage works. Documents from the City Engineer, Guildhall, Hull. Deposit £2, payable to City Treasurer. Tenders by May 17.

Huyton-with-Roby, Lancs.—Supplying and laying by machine approximately 3,500 sq. yd. of two-course hot rolled asphalt on Tarbock Road, A.5080, for U.D.C. Documents from the Engineer and Surveyor, Council Offices, Derby Road, Huyton. Tenders by May 6.

***Keighley, Yorks.**—Supply and apply tar and/or bitumen to roads, for B.C. Tenders by May 10.

***Leicester.**—Private street works, contract 21, for City Council. Tenders by May 19.

Lindsey.—Making-up of Fairfield Avenue, Chapel St. Leonards, approximately 107yd. long, for C.C. Documents from the County Surveyor, County Offices, Lincoln. Deposit £2 2s. Tenders by May 9.

Llanelly, Carms. — Proposed surfacing of roads and streets with ¾in. fine cold asphalt, for B.C., comprising approximately 55,000 sq. yd. of carriageway and the construction of approximately 1,000 sq. yd. of new foundations, together with all appurtenant work. Documents from the Borough Engineer, Town Hall, Llanelly. Deposit £2 2s. Tenders by May 7.

Mangotsfield, Glos. — Completion of roadworks to flats off The Crescent, Soundwell, for U.D.C. The work comprises approx. 170 sq. yd. of road foundation and 570 sq. yd. of surfacing, together with incidental works. Documents from the office of the Engineer and Surveyor, 26 South View, Staple Hill, Bristol. Deposit £2 2s. Tenders by May 10.

***Merthyr Tydfil, Glam.** — Construction of new bridge over River Taff, for B.C. Deposit £5 5s. Tenders by June 14.

Nantyglo and Blaina, Mon. — Construction of new roadways at (a) Ffosmaen, Nantyglo; and (b) Porters Road, Nantyglo, for U.D.C. The work comprises of bulk excavation, stone pitching foundations, tarmacadam carpeting, precast concrete kerbing, and surface water drainage. Documents from G. Roy Jenkins, clerk of the Council, Council Offices, High Street, Blaina. Tenders by May 6.

***Northampton.**—Various works, for B.C. Tenders by May 2.

***Pembrokeshire.**—Machine-laid road surfacing, 1960-61, for C.C. Tenders by May 12.

Penybont, Glam.—Completion of paths, carriageways and other appurtenant works at Llangynwyd and Coytrahen housing sites, for R.D.C., involving approx. 750 super. yd. and 3,170 super yd. roadworks respectively. Documents from the Engineer and Surveyor, Penybont Offices, Coity Road, Bridgend. Deposit £2 2s. Tenders by May 5.

Rotherham, Yorks.—Making-up of the following streets, for R.D.C.: (a) Queens Road, Swallownest — 200 lin. yd. of kerbing; 850 sq. yd. of carriageway and footpath construction; 120 lin. yd. of surface water drainage. (b) Highfield Grove, Brampton Bierlow—200 lin. yd. of kerbing; 830 sq. yd. of carriageway and footpath construction; 100 lin. yd. of surface water drainage. Documents from the Engineer and Surveyor, Council Offices, Moorgate, Rotherham. Deposit £2 2s. each. Tenders by May 14.

***Ruislip-Northwood, Middx.**—Highways and sewer works, for U.D.C. Deposit £2 2s. Tenders by May 11.

***Thurrock, Essex.**—Construction of a roundabout at the junction of Stanford Road and Brentwood Road, for U.D.C. Deposit £2 2s. Tenders by May 17.

Wanstead and Woodford, Essex.—Construction of about 180 sq. yd. of 6in. reinforced carriageway, 400 sq. yd. of tarmacadam hardstanding, 65 lin. yd. of 6in. drain, 225 sq. yd. of 4in. concrete garage bases, and appurtenant works, at Finchingfield Avenue, for B.C. Documents from the Borough Engineer, Municipal Offices, Woodford, E.18. Deposit £2. Tenders by May 17.

Weston-Super-Mare, Som.—Private street works at: (1) Saville Road; (2) Saville Crescent, for B.C., comprising kerbing, channelling, concrete flag paving to footways (approx. 1,700 sq. yd.), tarmacadam surfacing to carriageway (approx. 3,250 sq. yd.) and other incidental works. Documents from the Borough Engineer and Surveyor, Town Hall, Weston-super-Mare. Deposit £2. Tenders by May 16.

West Riding.—Construction and making up of a total length of 73yd. of private street known as The Brickyard in the Parish of Shafton, for C.C. Documents from the County Engineer and Surveyor, County Hall, Wakefield. Deposit £1, cheques payable to West Riding Treasurer. Tenders by May 9.

West Sussex.—Making up of Wendy Ridge, Rustington, for C.C. Documents from the County Surveyor, County Hall, Chichester. Deposit £1. Tenders by May 17.

Wokingham, Berks.—Minor road improvements during the year 1960-61, for B.C. Documents from the Borough Surveyor, Town Hall, Wokingham. Tenders by May 20.

***Worcester.** — Annual road surfacing contract, for City Council. Deposit £2 2s. Tenders by May 24.

Worsley, Lancs.—Road and sewer contract in neighbourhood unit No. 4, Little Hulton, for U.D.C. The area of carriageway is approx. 35,000 sq. yd. Documents from the Engineer and Surveyor, Town Hall, Walkden. Deposit £2 2s. Tenders by May 4.

Wrexham, Denbighs.—Following, for B.C.: (a) Construction of car park, including, pitched foundation, surface water drainage, fencing, and ancillary works; (b) dense tar surfacing in two course work (approximate area: 4,300 sq. yd.). Documents from the Borough Engineer and Surveyor, 31 Chester Street, Wrexham. Deposit £2 2s. each. Tenders by May 9.

SEWERAGE, SEWAGE AND REFUSE DISPOSAL

***Atherstone, War.**—Mancetter sewerage, contract 1, for R.D.C. Deposit £2. Tenders by May 16.

***Beeston and Stapleford, Notts.**—Beeston sewage disposal works extensions, for U.D.C. Deposit £5 5s. Tenders by May 23.

Benfleet, Essex.—Construction of private sewer, Merton and Villa Roads, South Benfleet, for U.D.C., including approx. 75yd. of 6in. sewer and 85yd. of 4in. drain. Documents from the Senior Public Health Inspector, Council Offices, Thundersley, Essex. Tenders by May 4.

Chapel-en-le-Frith, Derbys. — Upper End sewerage, for R.D.C., including construction of a sewage disposal works, comprising tanks, filters, pump house, etc., together with approximately 1,600yd. of 15in., 12in., 9in. and 6in. sewers, including manholes and sewage ejector station, and all incidentals thereto, in the parish of Wormhill. Documents from Brady and Partington, engineers, Market Street, Chapel-en-le-Frith. Deposit £5. Tenders by May 20.

***Haverfordwest, Pembs.**—Croesgoch sewerage scheme, for R.D.C. Tenders by May 20.

Horbury, Yorks.—Sewerage scheme, for U.D.C.: (Contract 1) Construction of approximately 1,086yd. of 15in. to 33in. diameter concrete pipe sewers, manholes, filter, humus tanks, sludge beds and two pumping stations, together with ancillary works, at Horbury; (2) supply and erection at Horbury of two 375 gallons per minute filter effluent pumps and two 200 gallons per minute sludge pumps, all complete with electric motors, starters and accessories. Documents from John H. Haiste and Partners, consulting engineers, Belmont House, 20 Wood Lane, Headingley, Leeds, 6. Deposit £3 3s. each (cheques payable to U.D.C.). Tenders by May 20.

***Kirkby-in-Ashfield, Notts.**—Reconstruction of sewage disposal works, contract K.3, for U.D.C. Deposit £5 5s. Tenders by June 8.

Lisburn, Antrim.—Following works, for R.D.C.: (1) Sewage disposal works at Ballynadolly, including 360yd. of 9in. dia. sewer; (2) relief sewer, Ardmore Avenue, Finaghy, comprising the laying of approx. 90yd. of 9in. dia. sewer. Documents from Rural District Council Offices, Harmony Hill, Lisburn. Tenders by May 16.

***Lleyn, Caerns.**—Sewerage and sewage disposal at Rhydyclafdy, for R.D.C. Deposit £3 3s. Tenders by May 11.

Lothingland, Suffolk.—Sewerage contract 8, New Pakefield Holiday Camp. Construction of a pumping station and approx. 1,200yd. of 4in. asbestos-cement rising main at Pakefield, in the Parish of Gisleham, for R.D.C. Documents from A. P. I. Cotterell and Son, engineers, 54 Victoria Street, Westminster, S.W.1, on or after April 29. Deposit £3 3s. Plans also seen at the Council's Offices, Rectory Road, Lowestoft. Tenders by May 23.

Lymm, Ches.—Sewerage contract 1, for U.D.C., comprising the construction of approx. 2,250 lin. yd. of 9in., 12in., 15in., and 18in. diameter concrete pipe sewers, together with manholes and appurtenant works. Documents from the offices of Charles J. Lomax and Sons, consulting engineers, 68 Barton Arcade, Manchester, 3. Deposit £5 5s., cheque payable to U.D.C. Tenders by May 9.

***Meriden, War.**—Bickenhill sewerage scheme, for R.D.C. Deposit £2 2s. Tenders by May 23.

Mitford and Launditch, Norfolk.—Piping of approx. 135yd. of ditch at Little Fransham, for R.D.C. Documents from A. G. Wright, assistant clerk, The Guildhall, East Dereham. Tenders by May 4.

***Newmarket, Suffolk.** — Burwell sewerage and sewage treatment works, contract 1, for R.D.C. Deposit £10 10s. Tenders by May 23.

***Romney Marsh, Kent.**—Dymchurch sewerage and sewage disposal, contract 1, for R.D.C. Apply by May 2. Deposit £10.

***St. Austell, Corn.**—Construction of concrete tube sewer at Ruddlemoor, for U.D.C. Deposit £3 3s. Tenders by June 4.

Sowerby Bridge, Yorks. — Wilmur Mount surface water sewer, for U.D.C., including the construction of approx. 66yd. of 12in. dia. sewer, 30yd. of 12in. dia. steel sewer, four manholes and appurtenant works. Documents from the Engineer and Surveyor's Office, Beech Royd, Beech Road, Sowerby Bridge. Deposit £2. Tenders by May 16.

***Swale, Kent.**—Bapchild sewerage, for R.D.C. Apply by 10 a.m., May 4.

Valley, Anglesey.—Two schemes of sewerage and sewage treatment works, both of which are within four miles of Valley Station, British Railways (L.M. Region), for R.D.C. The employment of a proportion of local labour from Anglesey will be a condition of each of the contracts: (1) Llanfachraeth, contract 1—comprising the laying of approximately 1,850 lin. yd. of 6in. diameter stoneware pipe sewers, together with precast concrete manholes, 250 lin. yd. of 4in. diameter spun-iron pipe rising main, and the construction of a sewage pumping station and sewage treatment work, comprising settlement tanks, bacterial filter, humus tank and sludge pumping station, sludge drying beds, and other incidental works at Llanfachraeth; (2) Caergeiliog, contract 1, comprising the laying of approximately 1,950 lin. yd. of 6in. diameter stoneware and spun-iron pipe sewers, together with precast concrete manholes, 1,650 lin. yd. of 4in. diameter spun-iron pipe rising main, and the construction of a sewage pumping station and incidental work at Caergeiliog, situate on the A.5 trunk road. Applications, in writing, to Richards and Dumbleton, consulting engineers, Cornwall Buildings, 45 Newhall Street, Birmingham, 3. Deposit £3 each (cheques payable to R.D.C.). Plans also seen at the Council Offices, Valley. Tenders by May 21.

Worsley, Lancs.—Construction of a 45in. dia. surface water relief sewer between Walkden Road and Whittle Brook, Walkden, approx. length 770 lin. yd., for U.D.C. Documents from the Engineer and Surveyor, Town Hall, Walkden. Deposit £2 2s. Tenders by May 4.

STREET LIGHTING

***Carlisle, Cumb.** — Morton Street lighting, stage 3, for City Council. Tenders by May 30.

Kirkcaldy, Fifes.—Following for the period June 16, 1960, to June 15, 1961, for B.C.: Lighting Department schedule 2—(a) electrical goods; (b) electrical fittings; (c) lighting columns; (d) lamps; (e) cables. Documents from Charles D. Chapman, town clerk, Town House, Kirkcaldy. Tenders by May 6.

Leighton Buzzard, Beds.—Following, for U.D.C.: Erection of 62 group A Stanton columns, complete with lanterns and control gear of A.E.I. Lamp and Lighting Co., Ltd., manufacture, on A.418, and the removal of 40 group B columns and re-erection on various district roads throughout the town, with new lanterns only of A.E.I. Lamp and Lighting Co., Ltd., manufacture. Documents from the Engineer and Surveyor, Council Offices, North Street, Leighton Buzzard. Deposit £2 2s. Tenders by May 11.

AWARDS

BUILDING AND DECORATING
(See also Housing Schemes)

Amesbury, Wilts.—Repainting of 94 houses at Amesbury, Bulford and Figheldean, 62 at Allington, Cholderton, Durnford, Idmiston and Winterbourne, and 98 at Durrington, Orcheston, Shrewton and Tilshead, for R.D.C. J. I. Hind, engineer and surveyor: Rudman and Sheen, Mandalay, Larkhill Road, Durrington, Wilts.

Bolton, Lancs.—Hostel and training centre for the Guide Dogs for the Blind Association: William Townson and Sons, Ltd., Higher Swan Lane, Bolton. Estimated cost £58,000. Hatchard-Smith and Bertram, architects, 212 Grand Buildings, Trafalgar Square, London, W.C.2, and Messrs. Gleeds, 106 Regent Street, London, W.1, are the quantity surveyors.

Burton-upon-Trent, Staffs.—Renewing flooring at Andressey Hospital, for the Birmingham Regional Hospital Board: J. A. Hewetson and Co., Ltd., 222 Lode Lane, Solihull, £1,686 (recommended).

Consett, Dur. — Alterations to X-ray department at Shotley Bridge Hospital, for Newcastle Hospital Board: R. Gallacher, Ltd., Laburnum Avenue, Blackhill, £6,500.

Additions to Consett bus station, for U.D.C. E. Simpkin, surveyor: C.T.C. (Builders), Ltd., Queens Road, Blackhill, £2,587.

Cornwall. — Extensions to provide additional classrooms at Bude - Stratton County Secondary School, for C.C. Sydney Gregson, architect, Keighley, Tregolls Road, Truro: Hobbs and Knight, Ltd., Lynstone, Bude, £7,936.

Cowes, I. of W.—Construction of conveniences and a shelter at the former Pavilion Hotel site, and conveniences in Queens Road, for U.D.C.: Westridge Construction Co., Ltd., 86 High Street, Ryde.

Daventry, Northants.—External painting of 71 houses at Spinney Hill estate, Braunston, for R.D.C.: H. H. Woolnough and Son, 40 Harlestone Road, Northampton, £1,272.

Doncaster, Yorks.—Painting of 201 houses at Armthorpe and 173 at Edlington, for R.D.C.: K. Needham, 23 Bainbridge Road, Doncaster, £1,653, and J. Ibbotson, Ltd., East Laithe Gate, Doncaster, £1,372, respectively (recommended).

Enfield, Middx.—Erection of a general-purpose building and laying out of a yard at Botany Bay Farm, for C.C. Newby Bros., Ltd., 309 Chase Road, London, N.14, £1,580 (recommended).

Epsom and Ewell, Surrey. — Demolition and reconstruction of baths hall ceiling, for B.C.: Charles Griffiths, £489, and Insulatall Services, Ltd., 63 Lincolns Inn Fields, London, W.C.2, £2,434, respectively (recommended).

Essex.—Extensions to Mid-Essex Technical College, Chelmsford, for C.C. The work consists of a three- and four-storey teaching block in reinforced concrete construction with part brick and curtain walling exterior, and a similar two-storey workshop block. H. Conolly, county architect: Gray Conoley and Co., Ltd., 29 Stephenson Street, London, E.16, £185,249.

Felling, Dur.—Erection of R.C. church and presbytery at Colegate Lane. David Brown, architect, 10 Lambton Road, Jesmond, Newcastle upon Tyne: Gordon Durham and Co., Ltd., Moor Lane, East Boldon.

Finsbury.—Erection of the first phase of a 270,000 sq. ft. building at the corner of City Road and Leonard Street for Leigh Commercial Developments, Ltd. A. G. Porri and Partners, architects, 13 Great James Street, London, W.C.1: Higgs and Hill, Ltd., Crown Works, South Lambeth Road, London, S.W.8 Total estimated cost £650,000.

Gloucestershire. — Erection of Soundwell swimming baths, for the Kingswood and Mangotsfield U.D.Cs. Burrough and Hannam, architects, Bedford House, 23 Richmond Hill, Bristol, 8: General contractor: William Cowlin and Son, Ltd., Stratton Street, Bristol. Principal subcontractors: Filtration—United Filters and Engineering, Ltd., London, S.W.15; heating—G. N. Haden and Son, Bristol; steelwork—Boulton and Paul, Norwich; faience and tiling—Stourbridge Glazed Brick and Tile Co., Dudley; electrical—W. T. Porter and Co., Bristol; Pyrock—Pyrock Contracts, Ltd., Birmingham; reinforcement — Square Grip Reinforcement Co., Ltd., London, S.W.8.

Harleston, Norfolk.—Erection of a factory at Harleston, for Rotary Hoes, Ltd., Station Road, West Horndon, Essex: Direct Labour. Estimated cost £500,000. Work commenced.

Harrogate, Yorks.—Steelwork and roofing for street lighting building at Claro Depot, for B.C.: Alltons (Structural Steel), Ltd., Ure Bank, Ripon, Yorks., £2,243 (recommended).

Hastings, Sussex.—Following external painting works, for B.C.: 93 houses and 71 prefabricated bungalows at Hollington (areas A and B)—H. L. Chatfield, 17a Magdalen Road, St. Leonards-on-Sea, £1,255 and £994, respectively; 84 flats and 200 houses at Rock Lane (area C)—Ringmer Building Works, Ltd., Blackman Avenue, Hastings, £8,301: Gensing Manor and 12 fire brigade and police houses (areas D and E.)—Standen and Apps, Ltd., 395 London Road, Silverhill, St. Leonards, £665 and £323, respectively; Garrod House (area E)—G. Stone (Hastings), Ltd., 16 Norman Road, St. Leonards-on-Sea, 718 (recommended).

Havant, Hants.—Erection of a 75,000 sq. ft. factory at Havant for Kenwood Manufacturing Co., Ltd.: Humphreys, Ltd., 199 Knightsbridge, London, S.W.7. Malcolm Peck, Roberts and Associates, architects, 15 Friary Street, Guildford, Surrey, and J. McBain and Partners, quantity surveyors, 25 Ludgate Hill, London, E.C.4.

Hayes and Harlington, Middx.—Redecoration of Barnhill Secondary and Primary Schools, for C.C.: Direct Labour (recommended). Estimated cost £12,800.

Holland.—Following works, for C.C.: Erection of new secondary school at Old Leake: J. T. Barber and Son, Ltd., 40 Hessle Avenue, Boston, £116,948; construction of new gymnasium at Boston Kitwood Girls' School—H. H. Adkins, Ltd., Wyberton West Road, Boston, £10,541.

Huddersfield, Yorks.—Erection of the first of two students' hostels to be built for the Technical Teachers' Training College, for B.C.: J. Wimpenny and Co., Ltd., Spurn Point, Linthwaite, Huddersfield.

Kirkby, Lancs. — Erection of the Merseyside B.M.C. factory on a 50-acre site bounded by South Boundary Road, Coopers Lane and Hornhouse Lane, for the Industrial Estates Management Corporation of England: Holland & Hannen and Cubitts (North West), Ltd., New Chester Road, Bromborough, Ches., £1,750,000. Harry W. Weedon and Partners, architects, 45-47 Calthorpe Road, Edgbaston, Birmingham, 15, and L. C. Wakeman and Partners, 11 and 12 Highfield Road, Edgbaston, Birmingham, 15, quantity surveyors.

Knutsford, Ches.—Conversion and adaptation of the Marcliff Cinema, Knutsford, into a public hall, for U.D.C.: S. Appleton (T. S. Meachin), Ltd., Winnington Lane, Northwich, £5,580. Work to commence May 17.

Leamington Spa, War.—Erection of five shops with five self-contained flats above, five garages and a service road at 105-123 Tachbrook Road, for L. T. Beamish and Sons, Ltd., 80 Alderbrook Road, Solihull. G. K. Moss, architect, 20 Radcliffe Road, Earlsdon, Coventry: Direct Labour. Estimated cost £23,000. Work commenced.

Leicester.—Erection of phases one and two of industrial buildings fronting Humberstone Lane, for Crane and Percival, Ltd.: Sherriff and Co. (1943), Ltd., Barkby Road, Leicester, estimated cost £60,000. Gordon White and Hood, architects, 75-77 King Street, and Alan Selby, quantity surveyor, 53 Gwendolen Avenue, Birstall. Work commencing September.

Liverpool. — Redevelopment of property in London Road, for the Arndale Property Trust, Ltd.: Leslie and Co., Ltd., 80 Woodland Road, Darlington. Shingler and Risdon, architects, 47 Bedford Road, London, W.C.1; R. G. McCaffrey, quantity surveyor, 32-34 Piccadilly, Bradford, 1; F. R. Bullen and Partners, site consultants, Dacre House, Dean Farrer Street, London, S.W.1.

London. — Following, for City Corporation: Rebuilding of the party wall between 126 Bishopsgate and 76 Houndsditch—Ashford and Moll, Ltd., 38 St. John Street, London, E.C.1, £1,669 (recommended); Trollope and Colls, Ltd., £2,257; Myton, Ltd., £2,725; internal redecoration of 39 flats and other works, including redecoration of old clubhouse at Ferndale Court, Brixton—Druce and Co., Ltd., Baker Street, London, W.1, £6,633 (recommended); C. and T. Painters, Ltd., £6,780; South London Decorators, Ltd., £7,094; Alfred Bagnall, Ltd., £7,107; W. G. Beaumont, Ltd., £7,707; Killby and Gayford, Ltd., £7,759; Mullen and Lumsden, Ltd., £9,141; John Greenwood, Ltd., £10,372; W. T. Champion and Son, Ltd., £10,432; Gee, Walker and Slater, Ltd., £11,004.

Londonderry.—Erection of two sanitary buildings at the caravan site, Coast Road, Portstewart, for C.C. W. and M. Given, surveyors, 1 Waterside, Coleraine: J. and H. E. Doherty, Ltd., Bushmills Road, Coleraine, N.I.

Longbenton, Northumb.—Extensions to research laboratories, for Thomas Hedley and Co., Ltd. Plans by L. J. Couves and Partners, Grainger Chambers, Hood Street, Newcastle, in conjunction with S. Burn, Hedley's staff architect: R. Bowey and Son, South Gosforth, £40,000.

Mablethorpe and Sutton, Lincs.—Construction of foreshore administration block with public lavatories and eight shops with intermediate public shelters on the central promenade at Mablethorpe, for U.D.C. G. R. A. Mack, architect: F. A. Would, Ltd., Ladysmith Road, Grimsby, Lincs., £11,993. Work commenced.

Merthyr Tydfil, Glam.—Eighty traditional type garages at Gurnos estate, for B.C.: C. Bryant and Son, Ltd., Small Heath, Birmingham, £12,065 (accepted); G. Warlow and Co., £12,238; N. Blackburn, £12,785; W. Cole, £12,985.

Middleton, Lancs.—Erection of the Cardinal Langley School, for Trustees of the Brothers of Christian Schools: William Townson and Sons, Ltd., Higher Swan Lane, Bolton. Estimated cost £226,000. Greenhalgh and Williams, architects, 15 Mawdsley Street, Bolton, and T. Sumner, Smith and Partners, 5-7 Library Street, Blackburn, are the quantity surveyors.

Midhurst, Sussex.—Conversion of an existing house at Sandrock into three dwellings. The work comprises structural alterations, provision of fittings, redecoration and repairs, for R.D.C. John Turner and Partners, architects, Rumbolds Hill: Bayley Bros., Lodsworth, near Petworth, £3,959 (accepted); H. J. Titcomb and Sons, £4,493; Hawkins Bros. (Gosport), Ltd., £4,685; Riley and Whishaw, £6,061. Work commencing May 1.

Monmouth.—Erection of a factory at Wonaston Road, for Tillotsons and Son, Ltd., Ashleigh, Heaton, Bolton. David Ellis, architect, 25 High Street, Old Chesterton, Cambridge: Johnson and Bailey, Ltd., 51a Norfolk Street, Cambridge, estimated cost £500,000. Site work has commenced.

Newcastle-under-Lyme, Staffs.—Erection of licensed premises, The Potter's Wheel, at Bradwell Lane, Porthill, for Bass, Ratcliff and Gretton, Ltd., Burton-on-Trent: H. Brereton and Sons, Ltd., Queen Street Works, Tunstall, Stoke-on-Trent. Forshaw, Greaves and Partners, architects, 11 King Street, Newcastle, Staffs., and Sutcliffe, Son and Watson, quantity surveyors, Madeley Manor, Madeley, near Crewe.

Newcastle upon Tyne.—Following works, for City Council: Reconstruction of conveniences in Nuns Moor and Walker Parks—Hugh Conway, Forest Hall, £2,456; bowls pavilion, incorporating public convenience, in Hodgkin Park—Stanley Thompson (Low Fell), Ltd., 36 Ashtrees Gardens, Gateshead, 9, £3,937; construction of rest room at the crematorium—James R. Rutherford and Sons, Ltd., Jesmond Road, Newcastle upon Tyne, 2, £2,700; improvements at Kenton Lodge Training College—Morris Bros., Back Whitfield Terrace, Newcastle, 6, £17,882 (all recommended).

Norwich.—Construction of recreation hall and administrative block at Little Plumstead Hospital, for the East Anglian Regional Hospital Board: J. Youngs and Sons, Ltd., 24 City Road, Norwich, £91,524 (recommended).

Peterborough.—Erection of new county primary school at Werrington, for Joint Education Board: B. Stokeley, Ltd., Eastfield Road, Peterborough, £67,617 (in lieu of previous tender).

Rawmarsh, Yorks.—Erection of baths hall extension, for U.D.C.: H. Godley, Ltd., 123 Bawtry Road, Wickersley, Rotherham, £10,947.

Stockton-on-Tees, Dur.—Repainting of 1,453 Council houses, for B.C.: Smiths Decorators (Stockton and York), Ltd., (516); A. C. Crossling (303), Edwin Turner (414), W. T. Pickering (220).

Stourbridge, Worcs.—Modernisation of plastic surgery unit at Wordsley Hospital, for the Birmingham Regional Hospital Board: A. J. Crump and Sons, Ltd., Aston Road, Dudley, £11,350 (recommended).

Street, Som.—Erection of a secondary modern school and area college, for C.C.: R. Oliver-Harris, county architect: William Townson and Sons, Ltd., Higher Swan Lane, Bolton. Estimated cost £380,000.

Sunderland, Dur.—Erection of factory, for Jackson the Tailor, Ltd. S. J. Stephenson, Gillis and Partners, architects, Saville Chambers, North Street, Newcastle upon Tyne: Shield Bros., Swalwell, Co. Durham, £250,000.

Sunderland, Dur.—Erection of new sports pavilion at Marley Pots playing field, for B.C.: Direct Labour, £4,840.

Swaffham, Norfolk.—Modernisation of 12 dwellings at School Road, Holme Hale, for R.D.C.: Minns Bros., £3,912.

Torquay, Devon.—Erection of a three-floor department store in The Strand, for Bobby and Co., Ltd.: Staverton Contractors, Ltd., Totnes, £63,354. Healing and Overbury, architects, Rodney Lodge, Rodney Road, Cheltenham; L. A. Francis and Sons, quantity surveyors, Vernon House, Sicilian Avenue, Bloomsbury Square, London, W.C.1; R. H. Thomason, structural engineer, Eaton Corner, Cobham, Surrey.

Urmston, Lancs.—Erection of factory for the Buxted Chicken Co., Ltd.: William Townson and Sons, Ltd., Higher Swan Lane, Bolton. Estimated cost £56,000. Lanchester and Lodge, architects, 10 Woburn Square, London, W.C.1, and Wakeman, Trower and Pantners, 47 Bloomsbury Square, London, W.C.1, are the quantity surveyors.

Warwick.—Modernisation of kitchen and repairs and redecorations to female ward 5 at Central Hospital, Hatton, for the Birmingham Regional Hospital Board: T. Nicholson (Leamington), Ltd., 24 Regent Street, Leamington Spa, £11,727, and Warley Buildings, Ltd., New Street, Leamington Spa, £1,554, respectively (recommended).

Wembley, Middx.—Adaptation of rooms at Woodfield Day Special School for domestic science and needlework, for C.C.: G. Holland and Sons, Broomfield Works, London, W.13, £710 (recommended).

West Bromwich, Staffs.—Extending X-ray department at Hallam Hospital, for the Birmingham Regional Hospial Board: W. Neenan (Contractors), Ltd., 207 Spon Lane, West Bromwich, £7,667 (recommended).

Wisbech, I. of E.—Erection of garages at Baxter Close, for B.C.: Law Bros. (Builders), Ltd., City Road, Littleport, Ely, £1,593.

CLOTHING AND TEXTILES

Stourbridge, Worcs.—Supply of 74 sets of overalls for parks department employees, for B.C.: Railway and General Stores Contractors (1953), Ltd., 675 Salisbury House, London, E.C.2, 27s. 4d. per set (recommended).

DEMOLITION

Bridgnorth, Salop.—Demolition of properties on Riverside, for B.C.: Divis (Contractors), Ltd., 10 Wrentham Street, Birmingham, 5, £378 (accepted); J. Nagle, £400; J. Duffy, £430.

Gosport, Hants.—Demolition and site clearance, for B.C.: site 1, five properties at Forton Road/Mill Lane—J. F. Clements, paying to Council £33; site 2, 17 properties and nine garages, Forton Road/The Crossways—Treloar and Sons (Contractors), Ltd., Gosport, paying to Council £53.

Rye, Sussex.—Demolition of ex-Naval huts, Camber Fields, and the clearance of the site, for B.C.: Beds. Dismantling and Demolition Co., 18 Moulton Avenue, Beds., £30 to be paid to Council (accepted); Wright and Pankhurst, Ltd., £100. Also to be paid to Council—R. W. Angell, £250; Taylor Bros., £2,762; H. F. Todd, £3,340; Romney Demolition, £400; Hailsham Plant Hire, Ltd., £1,049.

ELECTRICAL

Nuneaton, War.—Installation of a lift at Lydgate Court Flats, for B.C.: Express Lift Co., Ltd., 65 Barwick Street, Birmingham, £2,228 (recommended).

Stourbridge, Worcs.—Supply and erection of surface and underground cables, switchgear and distribution pillars at Wordsley Hospital, for the Birmingham Regional Hospital Board: Lee Beasley and Co. (Birmingham), Ltd., 41 Snow Hill, Birmingham, 4, £14,440 (recommended).

Willesden, Middx.—Electrical installation in garages and shops, blocks P and Q, South Kilburn, for B.C.: Direct Labour, £13,624 (recommended).

Woodbridge, Suffolk.—Supply and installation of lift for male wards 12, 13 and 14 at St. Audry's Hospital, Melton, for the East Anglian Regional Hospital Board: Evans Lifts, Ltd., Leicester, £2,330 (recommended).

FENCING

Bootle, Lancs.—Supply and erection of approx. 314 lin. yd. of 2ft. 6in. high wrought-iron railings to the boundary walling of St. Mary's Churchyard, for B.C. Thomas Bowen, Ltd., Bowen Street, Parkfields, Wolverhampton, £1,437.

Sunderland, Dur.—Supply and erection of wrought-iron fencing and gates at Allendale Road children's playground, for B.C.: H. Marsh and Son, Ltd., Sunderland, £1,525 (recommended, subject to Ministry approval).

GAS AND WATER SUPPLY

Bourn, Cambs.—Reconditioning of the well at Bourn, for the Chesterton and St. Ives Joint Water Board: F. Smith and Son (Grimsby), Ltd., Osborne Street, Grimsby, £2,066.

Cheltenham, Glos.—Construction of water supply scheme for Cowley, for R.D.C.: Ernest Evans, £6,363.

Cookstown, Tyrone.—Construction of two 100,000-gallon service reservoirs, together with access roads, ancillary pipework, etc., in the townlands of Craigs and Creevagh, for R.D.C. R. Ferguson and S. McIlveen, consulting engineers, 15 College Gardens, Belfast, 9: P. O'Neill and Co., Omagh, Co. Tyrone, £11,224 (accepted); W. J. Crooks, £11,878; Robt. H. Hughes, £12,083; White and Co., £13,178.

Durham.—Supply of following, for New Derwent Valley reservoir, for Durham County Water Board: 36in. dia. steel pipes—South Durham Steel and Iron Co., Ltd., £46,350; steel pipes and roller bearings—Stewart and Lloyds, Ltd., Glasgow, £12,713 and £1,647, respectively; valves—Glenfield and Kennedy, Ltd., Kilmarnock, £840.

Inverness-shire.—Construction of small steam intake, combined filter and clear water tank, and supply and laying of about one mile of 2in. diameter a.c. piping at Ardvasar, Skye, for C.C.: Gordon Brown, Mallaig (recommended).

Kincardineshire.—Loch Lee water supply scheme, distribution piping, phase 1, contract 3, for C.C., including excavating and refilling trenches for, and providing, laying and jointing about 18,750yd. of 6in. diameter and 1,300yd. of 2in. diameter asbestos-cement pipes, and the construction of a reinforced concrete tank of 50,000 gallons capacity, at Hallhill, near Edzell, and relative works. Crouch and Hogg, engineers, 18 Woodside Crescent, Glasgow, C.3: McKean and Co. (Glasgow), Ltd., 3 Clifton Place, Glasgow, C.3, £37,112.

Nant Conway, Caerns.—Trefriw water supply, contract 2, renewal of mains, for R.D.C. Richards and Dumbleton, consulting engineers, Cornwall Buildings, 45 Newhall Street, Birmingham, 3: Roger Hughes and Co., Ltd., Plas Gwilym Quarry, Old Colwyn, Colwyn Bay, £4,763. Work to commence May.

Pewsey, Wilts.—Regional water supply scheme, stage 3, contract 1, for R.D.C., comprising the construction of approximately 32,000 lin. yd. of spun-iron water mains, 8in., 6in., 4in., and 3in. in diameter, together with the construction of a reinforced concrete reservoir of 250,000 gallons capacity, with incidental works. A. H. S. Waters and Partners, consulting engineers, 25 Temple Row, Birmingham, 2: Surface Maintenance Services, Ltd., 124 Old Christchurch Road, Bournemouth, £106,14' (accepted); Delta (Construction), Ltd. £110,232; Thos. Carey and Sons, Ltd. £111,536; James and Crockerell, Ltd. £117,351; Avonmouth Plant and Construction Co., Ltd., £120,638; Norwest Construction Co., Ltd., £123,395; Hadsphaltic Construction Co., Ltd., £125,682; Henry Osman and Co., Ltd., £131,997. Work commencing May.

Rushden, Northants.—Laying of about two miles of 9in. diameter and 12in. diameter spun-iron pipes, together with certain ancillary works, at Rushden, and the construction of a short access road to the site of a proposed water tower, for the Higham Rerrers and Rushden Water Board. Binnie, Deacon and Gourley, consulting engineers, Artillery House, Artillery Row, Westminster, S.W.1: Biggs, Wall and Co. (Hitchin), Ltd., 130 Stevenage Road, Hitchin, Herts., £9,750. Work commencing May.

St. Neots, Hunts.—Laying water mains at Kimbolton and Tilbrook, for R.D.C.: Stirton Partners, Ltd., Stamford House, Tally Ho Corner, 871 High Road, North Finchley, London, N.12.

Sussex.—Laying of approx. 6,940yd. of 12in. dia. spun-iron mains with flexible joints and 1,140yd. of 6in. dia. asbestos-cement main and joints from the board's depot at Smock Alley to the junction of A.283 and A.24 at Washington, all within a radius of 12 miles from Horsham, for the North-West Sussex Water Board: Southern Counties Construction Co., Ltd., 204 London Road, Waterlooville, Portsmouth, £14,668 (accepted): B.C. Construction Co., Ltd., £7,488; Barrie A. Hill and Co., £9,647; K. Mikolay and Son, Ltd., £10,053; A. L. J. Davis (Public Works), Ltd.,

£14,796; Thomas Carey and Son, Ltd., £15,340; McGinty Construction Co., Ltd., £15,448; F. J. Dunkerton, Ltd., £16,116; P. Lavelle, Ltd., £18,045; Hugh Brown (Engineers), Ltd., £18,844; William Press and Son, Ltd., £19,182; Austin Shrives, Ltd., £21,377; Bridgwater Bros. (P.W.C.), Ltd., £21,902; Johnson Bros. (Aylesford), Ltd., £22,686.

Tunbridge Wells, Kent. — Underground exploratory works at the Hayesden pumping station, for B.C.: Le Grand Adsco, Ltd., Southall, Middx., £6,959 (recommended).

Worcester.—Provision of low level water storage tank for Powick Hospital, for the Birmingham Regional Hospital Board: Brightside Heating and Engineering, Co., Ltd., 17 Summer Row, Birmingham, 3, £13,036 (recommended).

HARBOURS, PIERS AND SEA DEFENCE WORKS

Sunderland, Dur.—Realignment of shipbuilding berths at the Pallion Shipyard of Short Bros., Ltd.: Brims and Co., Ltd., Pandon Buildings, City Road, Newcastle upon Tyne.

HEATING AND VENTILATING

Aylsham, Norfolk.—Installation of new boiler plant and services at St. Michael's Hospital, for the East Anglian Regional Hospital Board: Davey Paxman and Co., Ltd., Standard Ironworks, Colchester, £6,142 (recommended, subject to Ministry approval).

Burton-upon-Trent, Staffs. — (a) Provision and installation of coal-handling plant and (b) supply and installation of automatic chain grate stokers in connection with remodelling of engineering services at Andressey Hospital, for the Birmingham Regional Hospital Board: (a) J. Proctor and Co., Ltd., £4,514, and (b) J. Hodkinson (Salford), Ltd., Brettenham House, Lancaster Place, London, W.C.2, £5,196 (recommended).

Newmarket, Cambs.—Mechanical engineering services for new group pharmacy at Newmarket General Hospital, for the East Anglian Regional Hospital Board: Kershaw Heating, Ltd., 72a Ainsworth Street, Cambridge, £4,348 (recommended).

South Shields, Dur.—Heating for additions to Cleadon Park Secondary School, for E.C.: G. S. Akinhead and Co., Ltd., Newcastle upon Tyne, £9,668.

Tunbridge Wells, Kent.—Supply and installation of a third boiler at the Town Hall, for B.C.: S. E. Haward and Co., Ltd., Goods Station Road, Tunbridge Wells, £986 (recommended).

HOUSING SCHEMES

Abram, Lancs.—Twenty-six houses at Bickershaw, for U.D.C.: G. and J. Seddon, Ltd., Little Hulton, £41,948.

Barnsley, Yorks.—Ninety dwellings, Gawber Road and Athersley North and South estates, for B.C.: Harlow and Milner, Ltd., Warrengate, Wakefield, £100,196 (recommended, subject to Ministry approval).

Blackpool, Lancs.—Block of flats for Royal Co-operative Collecting Insurance Society. W. L. Lowe, Ferguson and Partners, architects and surveyors, 3 Eberle Street, Liverpool: William Townson and Sons, Higher Swan Lane, Bolton. Estimated cost £152,000.

Bootle, Lancs. — Five houses on Marsh Lane redevelopment site and improvement to six existing dwellings adjacent to the site, for B.C.: Direct Labour, £10,777.

Bridgnorth, Salop.—Sixty-eight housing units at Sydney Cottage estate extension, for B.C.: Gregory Housing, Ltd., 21 Farncombe Road, Worthing, Sussex., £92,515.

Clitheroe, Lancs.—Fifty-six dwellings on the Manor Road housing site, comprising 24 one-bedroom maisonnettes, 14 one-bedroom bungalows and 18 two-bedroom bungalows, for B.C. J. Newton Bell, borough engineer: D. L. Grimshaw and Co., Ltd., Wood Top, Bury Road, Rawtenstall, £65,088. Work about to commence.

Cudworth, Yorks. — Six blocks of four two-storey, one- and two-bedroom flats on the Darfield Road housing site, for U.D.C.: Websters, Ltd., Old Denaby, near Mexborough, £28,000 (accepted, subject to Ministry approval); J. H. Gilbert, Ltd., £28,300; Hey and Muffin, £28,560; B. Walker, Ltd., £30,030.

Daventry, Northants.—Six bungalows at Braunston, for R.D.C.: Midland Builders, Ltd., Ashby Road, Daventry, £7,038.

Eastbourne, Sussex.—One block of 10-storey flats at Marine Parade, for Metropole Court (Eastbourne), Ltd.: William Townson and Sons, Ltd., Higher Swan Lane, Bolton. Estimated cost £150,000.

Epsom and Ewell, Surrey.—Forty-six dwellings at Ruxley Farm housing estate, for B.C.: E. and J. Cotton, Ltd., High Street, Iver, Bucks. (recommended).

Hambledon, Surrey.—Fifteen bungalows and site works at Farsonage Road, Cranleigh, for R.D.C.: Godalming Building and Construction Co., Ltd., Langham Trading Estate, Godalming, £23,985 (accepted); H. J. Titcomb and Sons, Ltd., £25,014: R. J. Stagg, Ltd., £24,392; Deeks and Steere, Ltd., £25,873; Thomas Bros., £28,356; B.D.S. (Cranleigh), Ltd., £33,773.

Harpenden, Herts.—Twelve permanent traditional type cottage flats and six traditional type houses on the Batford (South) housing estate, for U.D.C. J. Howard Leech, architect, Ridgeway, Burford, Oxon: Davey Estates, Ltd., Station Road, Boreham Wood, Herts., £26,475 (accepted); Stevenson-Spence, Ltd., £27,074; Cockcroft and Preece, Ltd., £29,190. Work to commence June.

Hartley Wintney, Hants.—Two semi-detached police houses at Hartley Row police station, for Hampshire and Isle of Wight Police Authority: W. M. Annette and Co., Ltd., Winchester Road Works, Basingstoke, £5,463.

Hartley Wintney, Hants.—Block of two-bedroom flats at Priory Lane, for R.D.C.: Pool and Sons, Hartley Wintney, £5,394 (subject to Ministry approval).

Hebburn, Dur.—Steelwork for four-storey maisonnettes in Station Road, for U.D.C.: Palmers Co., Ltd., Hebburn, £9,210.

Nantwich, Ches. — Four bungalows at Park Road, Willaston, for R.D.C.: Preston and Owen, Ltd., Rainbow Street, Crewe, £4,200.

Nuneaton, War. — Old Persons' dwellings, Hall End redevelopment, for B.C.: A. R. Lane, Ltd., St. Patricks Road, Coventry, £44,785 (recommended).

Oakham, Rutland.—Six bungalows at Empingham, for R.D.C.: J. S. Clark, Oakham, £9,341.

Salford, Lancs. — Three hundred and thirty-nine flats and 28 maisonnettes on land in Silk Street, in the St. Matthias' clearance area No. 2, for City Council: Direct Labour. Estimated cost £800,000.

Shrewsbury, Salop.—Sixty-two dwellings at part 5 of Harlescott Grange estate, for B.C. A. T. Morris, borough surveyor: M. A. Boswell (Contractors), Ltd., 124 Compton Road, Wolverhampton.

Stanley, Dur. —Eighty-eight houses and 14 old people's cottages and 54 garages on the Lintz site, for the U.D.C. R. H. Snowball, surveyor: Thomas Armstrong, Ltd., Robson Street, Newcastle upon Tyne.

Stourbridge, Worcs.—Twenty-seven flatlets, warden's flat, common room, etc., at corner of Prescot Road and Grange Lane, for B.C.: Claude Burkes and Sons, Ltd., Hayseech Road, Halesowen, £34,108 (recommended, subject to Ministry approval).

Tottenham, Middx.—Following works, for B.C.: 102 dwellings, Northumberland Park redevelopment scheme — Hawker-Smith, Ltd., 130 Penhill Road, Bexley, Kent, £236,600 (recommended, subject to Ministry approval).

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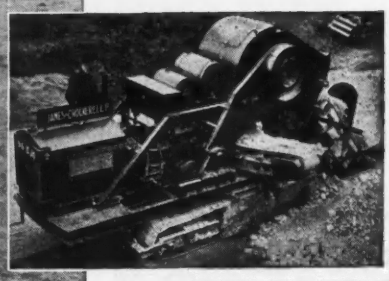

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Lower Grosvenor Place, London, S.W.1, £11,918, and Crittall Manufacturing Co., Ltd., 210 High Holborn, London, W.C.1, £1,767, respectively (recommended).

Tunbridge Wells, Kent. — Fifty-six dwellings (extension of contract 19) at Sherwood Estate, for B.C.: W. Ellis (Etchingham), Ltd., High Street, Etchingham, Sussex (recommended, subject to Ministry approval).

Valley, Anglesey.—Fifty unity traditional dwellings, complete with roads and sewers, at Tan-y-Bryn Valley, for R.D.C.: John Parry and Hughes, Glanrafon, Llanfechell, Anglesey, £75,539. Work to commence May 1.

Vaynor and Penderyn, Brecons.—Twenty-nine houses at the Conservative Hall Field site, Cefn Coed, 29 houses at Trefechan estate, and 19 houses and eight bungalows at Llwyn Onn estate, Penderyn, for R.D.C.: Gregory Housing, Ltd., 21 Farncombe Road, Worthing, Sussex, £58,395, £57,192 and £45,215, respectively (subject to Ministry approval).

Walsingham, Norfolk. — Following works, for R.D.C.: Three bungalows at Stibbard—I. J. Hooker, 18 Mill Lane, Briston, £3,888; demolition of existing cottages and erection of six bungalows on site at Wighton—Fisher and Sons (Fakenham), Ltd., Fakenham, £10,434.

West Hartlepool, Dur. — Thirty houses at Seaton Carew, for B.C. A. G. Sinclair, borough architect: G. M. Pearson and Son, Front Street, Hetton, Co. Durham, £38,740.

Willesden, Middx. — Sub-contractors for plastering work, Burnley Road site and reinforced concrete floors and roofs, blocks Y (phase 2) and W, South Kilburn, for B.C.: W. A. Telling, Ltd., 62 Raymouth Road, London, S.E.16, £1,449, and Helical Bar and Engineering Co., Ltd., 82 Victoria Street, London, S.W.1, £5,777, respectively (recommended).

PLANT AND MECHANICAL TRANSPORT

Bridgnorth, Salop.—Supply of a 2-ton petrol engine Morris Commercial tipping lorry, for B.C.: Northgate Garage (Bridgnorth), Ltd., Northgate, Bridgnorth, £781.

Chichester, Sussex.—Supply of a Ford 5-ton forward control tipping lorry, for City Council: Page's Garage, Northgate, Chichester, £1,225 (recommended).

Fulham.—Supply of two refuse collection vehicles and one container bulk loader, for B.C.: Shelvoke and Drewry, Ltd., Letchworth, Herts., £2,932, £2,932 and £3,507, respectively (recommended).

Harrogate, Yorks.—Supply of chlorinator for High Harrogate Swimming Baths, for B.C.: Wallace and Tiernan, Ltd., Power Road, Gunnersbury, London, W.4, £668 (recommended).

Stourbridge, Worcs.—Supply of the following, for B.C.: One Muir-Hill mechanical shovel—E. Boydell and Co., Ltd., Old Trafford, Manchester, £1,791, plus delivery charges; one Bedford-Laker mechanical road sweeper — North Worcestershire Garages (Stourbridge), Ltd., Oldswinsford, Stourbridge, £2,380, plus £7 17s. 6d. delivery charges (recommended).

Thornaby-on-Tees, Yorks.—Supply of one refuse collection vehicle of 7 cu. yd. capacity, painted to the Council's requirements and delivered to their depot, for B.C.: The Minories Garages, Ltd., Northgate, Darlington, £936 (accepted); R. H. Patterson and Co., Ltd., £983; Dennis Bros., Ltd., £1,635; H. Young (Motors), Ltd., £1,081; Sherwood Bros., Ltd., £1,093; Wheatley Motors, Ltd., £977; Shelvoke and Drewry, Ltd., £1,713; Murray and Charleton, Ltd., £1,937; Oxbridge Garage Co., Ltd., £1,026; Charles G. S. Buist, Ltd., £1,023; Geo. Heron and Co., Ltd., £1,040; Westgate Motors (Wakefield), Ltd., £1,022; Transport Equipment (Thorneycroft), Ltd., £1,764; Furrows, Ltd., £900; Sherwood Bros., Ltd., £1,173.

Torpoint, Corn.—Supply of a petrol-engined 5-ton end-tipper lorry with a steel body, for U.D.C.: A. C. Turner, Ltd., Derrys Cross, Plymouth, £979 (accepted); Reeds (Plymouth), Ltd., £930; M. Thomas (Motors), Ltd., £1,217; Dennis Bros., Ltd., £1,460; W. Mumford, Ltd., £1,000; Watkins Tractors and Motors, Ltd., £1,050.

Tunbridge Wells, Kent.—Supply of a 3-stage reciprocating pump compressor, for B.C.: Ingersoll Rand, Ltd., 165 Queen Victoria Street, London, E.C.4, £1,251 (recommended).

PLAYING FIELDS, PARKS, ETC.

Folkestone, Kent.—Reinstatement of land at the Capel Battery site, for B.C.: J. W. Ellingham, Ltd., 4 Granada House, Gabriels Hill, Maidstone (recommended, subject to Ministry approval). Estimated cost £2,875.

Potters Bar, Middx.—Laying out of first phase of playing field at Sunnybank Primary School, for C.C.: Hugh Pearl (Contracts), Ltd., £1,036 (recommended).

Sunderland, Dur.—Construction of Allendale Road children's playground, for B.C.: Smith Bros., Houghton-le-Spring, £3,216 (recommended, subject to Ministry approval).

Tottenham, Middx.—Reconstruction of tennis courts at Lynch Youth House, for B.C.: E. Doe and Sons (Contracts), Ltd., 118 Hall Lane, Upminster, Essex (recommended, subject to C.C. approval).

RAILWAY ENGINEERING

British Railways.—Following contracts placed:

Scottish Region:

Provision of diesel maintenance facilities, Inverurie — Don (Contractors), Ltd., Inverurie.

Provision of workshops and offices, demolition work, etc., Inverness—James Campbell and Son, Inverness.

Glasgow suburban electrification—building of centre side walks and staircases, Queen Street Low Level Station, Glasgow—Blackburn (Dumbarton), Ltd., Dumbarton.

RIVER AND FLOOD PREVENTION WORKS

Tottenham, Middx. — Heybourne Ditch flood relief scheme, for B.C.: W. Press and Son, Ltd., Willoughby Lane, London, N.17, £54,313 (recommended).

ROADS, BRIDGES AND SITE WORKS

Baildon, Yorks.—Surface dressing of approx. 25,000 sq. yd. of carriageway, for U.D.C.: Scientific Roads (Northern), Ltd., Station Road, Shipley, Yorks.

Bradford, Yorks.—Asphalt surfacing of certain roads in the City, for City Council: Trinidad Lake Asphalt (North-Western), Ltd., India Buildings, Water Street, Liverpool, £25,288 (recommended).

Carlisle, Cumb.—Wigton Road improvement, for City Council: Michael Thompson, Ltd., St. Ninians Road, Carlisle, £74,370 (recommended, in lieu of previous tender).

Chesterfield, Derbys.—Construction of following, for R.D.C.: (a) Streetfields housing

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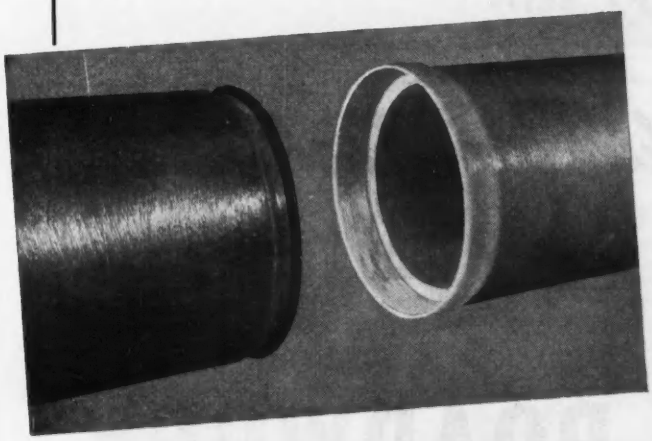

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estate (first stage): halfway, Eckington, comprising approximately 2,800 sq. yd. of tarmacadam carriageways, 940 lin. yd. of 6in. to 33in. diameter sewer, 500 lin. yd. of 6in. diameter sewer, together with manholes; (b) Woodview housing estate (footpaths and verges, parts 1 and 2), Eckington, consisting of approximately 1,730 sq. yd. of tarmacadam and 1,530 lin. yd. of 6in. by 12in. flat-topped edging, together with incidental works: (a) William Drabble and Sons, Ltd., 30 High Street, Mexborough, near Sheffield, £14,666, and (b) Preskey Bros., 200 Hasland Road, Chesterfield, £1,996.

Corby, Northants. — Surface dressing about 50,000 sq. yd. of carriageway, for U.D.C. D. W. Greaves, engineer and surveyor: Aubrey Watson, Ltd., Quebec Road, Henley-on-Thames, 7.58d. per sq. yd., using cut-back bitumen at rate of 5yd. per gallon. Chippings provided by the Council.

Epsom and Ewell, Surrey.—Following works, for B.C.: Improvement of Kingston Road, from Mavis Avenue to Stoneleigh Park Road —W. and J. Glossop, Ltd., 123 East Hill, London, S.W.18, £55,931 (recommended, subject to M.T. approval). A.24—London Road (part of), Ewell—minor improvement "Bluegates" and "Ivy Cottage"—Allmacadams, Ltd., 332 Brighton Road, Croydon, £841; B.280—Chessington Road (part of), Epsom—carriageway reconstruction —T. Vickers, Ltd., 288 Kingston Road, Leatherhead, £5,595; B.284—Hook Road (part of), Epsom—Chase Road to Lower Court Road, and Stoneleigh Park Road (part of), Ewell—Kingston Road to Station Approach—William F. Rees, Ltd., Marlpit Lane, Coulsdon, £808 and £1,958, respectively; trench reinstatement and highway maintenance, and footpath—White Horse Drive to Rosebank, Epsom—W. H. Gaze and Sons, Ltd., 19 High Street, Kingston-upon-Thames, £6,198 and £1,206, respectively (recommended).

Folkestone, Kent. — Surface dressing of carriageways and footpaths, for B.C.: Johnson Bros. (Aylesford), Ltd., Vale Road Tonbridge (recommended).

Godalming, Surrey. — Construction of car park in The Square, for B.C.: E. Mears (Contractors), Ltd., Chertsey Road, Byfleet, £8,007 (recommended).

Godmanchester, Hunts. — Demolition and rebuilding of the Chinese Bridge at Godmanchester, including ancillary works, for B.C. Lea, Milner and Wardley, architects, 4 Market Hill, Huntingdon: G. B. Brudenell, Ltd., Godmanchester, £1,580 (recommended); F. B. Thackray and Co., Ltd., £2,493.

Gosport, Hants.—Supply of hot chip dressing for classified and district roads during the present financial year, for B.C.: Johnston Bros. (Contractors), Ltd., Ibex House, Minories, London, E.C.3, 2s. 1½d. per sq. yd. for a minimum area of 10,000 sq. yd.

Huddersfield, Yorks.—Swan Lane redevelopment, sewer diversion, and Primrose Hill redevelopment, Rawthorpe Estate, sections 1 and 2, for B.C. Works comprise construction of approx. 1,400 sq. yd. of pitched carriageways, 600 lin. yd. of kerbing, 1,000 sq. yd. of concrete flagging, 380 lin. yd. of 9in. to 15in. dia. sewer, and ancillary works: K. J. Construction, Ltd., Lion Chambers, John William Street, Huddersfield. Works commencing in a few weeks.

Ilford, Essex. — Reconstruction of Coventry, Perth and Wellesley Roads, for B.C.: W. and C. French, Ltd., 215 Brentwood Road, Romford, Essex, £24,339 (accepted); Percy Bilton, Ltd., £24,985; Fitzpatrick and Son, Ltd., £24,773; Gabriel, Ltd., £26,895; London Paving Co., £29,292; J. Murphy and Sons, £33,480; William Old, Ltd., £30,789; Ruddick and Meighan, Ltd., £27,051; Scott Hale (Contractors), Ltd., £26,203.

Lancashire. — Roadworks and bridgeworks in the extension of the Widnes Approach Road, contract B, from the termination of contract A, northwards towards Ditton Road, for C.C. Roadworks comprise about 210 lin. yd. of the Widnes Approach Road and about 270 lin. yd. of a slip road leading to the trading estate. Bridgeworks comprise the construction of a two-span bridge, 123ft. long, over private sidings, a single 77ft. span bridge over a main line railway, and a reinforced concrete retaining wall, 285ft. long. Decks consist of steel girders carrying a reinforced concrete road slab, and the abutments and wing walls are of brick-faced mass concrete. All foundations are supported on bored cast in-situ piles. James Drake, county surveyor: Leonard Fairclough, Ltd., Chapel Street, Adlington, Lancs. Work commencing at once.

Leatherhead, Surrey.—Construction of garage forecourts totalling approximately 5,000 sq. yd., for U.D.C.: L. W. Brown, Ltd., 150 Feltham Road, Ashford, Middx., £2,835.

Littlehampton, Sussex.—Making-up of part of Holmes Lane, 110ft. in length (contract 10), for U.D.C. T. B. Marshall, engineer and surveyor: E. Jenkins, Ltd., Littlehampton Road, Ferring, Sussex, £712. Work commencing June.

London. — Following, for City Corporation: Layout of open space on the north side of Upper Thames Street, between College Hill and Little College Lane—William F. Rees, Ltd., 54 Victoria Street, London, S.W.1, £9,399 (recommended); Fitzpatrick and Son (Contractors), Ltd., £9,556; Mowlem (Civil Engineering), Ltd., £9,474; Holland & Hannen and Cubitts (Great Britain), Ltd., £9,689; Trollope and Colls, Ltd., £9,779; Howard Farrow, Ltd., £9,800; site filling works on frontage to building under construction at Houndsditch and Camomile Street, site B—Willment Bros., Ltd., Baltic Wharf, Waterloo Bridge, London, S.E.1, £1,624 (recommended); Gee, Walker and Slater, Ltd., £1,903; Fitzpatrick and Son (Contractors), Ltd., £2,104; Goodman Price, Ltd., £2,439; Mowlem (Civil Engineering), Ltd., £3,047.

Mablethorpe and Sutton, Lincs.—Construction of a caravan park at Sutton-on-Sea, for U.D.C. The site contains approx. seven acres, and the work includes site preparation, soiling, seeding and turfing, together with the provision of surface water drains, soil drains, water mains, roads, footpaths, car parks and fencing, etc.: T. Debney and Co., Ltd., Grimsby, £16,827.

Meopham, Kent.—Renovation of drive in tarmacadam and cold bitumen spraying and gritting at Arborfield, for Dr. W. D. Hasler: Hodsons, Ltd., 17 Wrotham Road, Gravesend.

Pewsey, Wilts.—Construction of a car park off North Street, for R.D.C. The work includes levelling and earth moving by machinery and tarmacadam surfacing. E. H. E. Hall, engineer and surveyor: G. Pearce and Sons, Potterne, near Devizes, £1,996 (accepted); The Cradmin Co., Ltd., £2,026; D.R. and B. (Salisbury Plain), Ltd., £2,216; Nott, Brodie and Co., Ltd., £2,228; Wilts Tarmacadam Co., £2,255; Amey's Asphalt Co., Ltd., £2,276; James and Crockerell, Ltd., £2,276; Anglo-American Asphalt Co., Ltd., £2,370; Robert Walker, £2,372; A. J. Dunning and Son, Ltd., £2,453; Roads Construction, Ltd., £2,463; Blackfords, £2,495. Work about to commence.

Shoreham-by-Sea, Sussex. — Making-up of Eastern Avenue (part of). The main works

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involved are as follows: 750 super. yd. of footpaths reconstruction; 300 super. yd. of verges; 230 lin. yd. of new kerbing; 1,950 super. yd. of ¾in. cold asphalt surfacing to existing concrete carriageway; minor S.W. drainage; and other ancillary items, for U.D.C. W. H. Fraser, engineer and surveyor: The B.C. Construction Co., Ltd., 58 Buckingham Road, Shoreham-by-Sea, Sussex, £2,838. Work commencing two to three months.

Sizewell, Suffolk.—Construction of approach road to proposed nuclear power station, for East Suffolk C.C.: Roadworks (1952), Ltd., 57-61, Commercial Road, Ipswich.

Sunderland, Dur.—Construction of part of new trunk road linking North Bridge Street with the seafront and reconstruction of Pallion New Road and Westmoor Road, for B.C. T. Donkin, borough engineer: Edwin Clarkson, Ltd., East Boldon, £40,502 and £13,314, respectively.

Swinton and Pendlebury, Lancs.—Making-up following streets, for B.C.: Torkington Road and Norbury Grove—Bituminous Surfacings, Ltd., Manchester, £1,143 and £516, respectively; Stratton Road—W. Snape and Co., Clifton House, Clifton Road, Eccles, £492; Dudley Road and Hardy Grove—M. C. Kennedy and Co., Manchester, £630 and £1,753, respectively (all recommended).

Tunbridge Wells, Kent.—Construction of roads and sewers at North Farm industrial estate extension and at the Sherwood estate, for B.C.: W. H. Bensted and Son (Contractors), Ltd., Coombe Quarries, Maidstone, £6,319 and £33,297, respectively (recommended, subject to Ministry approval).

Ulverston, Lancs. — Construction of approx. 570 super. yd. of tarmacadam footway and carriageway, 144 lin. yd. of 6in. surface water sewer, together with the laying of 87 lin. yd. of 3in. water main, Flookburgh (hospital site), for R.D.C. H. Whittaker, engineer, 24 Queen Street: J. Leck and Son, Priory Road, Ulverston, £2,435. Work commencing May 2.

Uxbridge, Middx.—Reconstruction of church hall and High Street, Harefield (part), contract 432, for B.C.: Willment Bros., Ltd., 462 London Road, Isleworth, £20,622 (accepted); Highways Construction, Ltd., £21,163; Percy Bilton, Ltd., £21,258; Ruddock and Meighan, Ltd., £21,307; Sydney Green and Sons, Ltd., £21,336; Tarmac Civil Engineering, Ltd., £22,223; Val de Travers Asphalte, Ltd., £22,815; Roads and Public Works, Ltd., £23,404. Probable date of commencement, May 1960.

Wallasey, Ches. — Construction of approx. 125 lin. yd. of pitched carriageway, flagged footways, and other incidental works, in Broster Avenue, Moreton, for B.C. E. A. Slight, borough engineer and surveyor: Charles L. Warren, Ltd., St. Paul Road, Wallasey, £2,715. Work to commence May.

Warwickshire.—Road works north-east of Birmingham/Nottingham trunk road, A.453—Seckington parish boundary to No Man's Heath, section 1, for C.C., comprising the construction of about 530 lin. yd. of new 24ft. carriageway, the lowering of a crest and the widening and realigning of about 470 lin. yd. of existing carriageway with earthworks, surface water drainage and kerbing. D. Watson, county surveyor: Midland Excavators, Ltd., Swadlincote Road, Woodville, near Burton-on-Trent. Work commenced.

West Hartlepool, Dur.—Reconstruction of Seaton Carew railway bridge for the British Transport Commission: Cleveland Bridge and Engineering Co., Ltd., Smithfield Road, Darlington.

Willesden, Middx.—Annual tenders for maintenance works during 1960-61, for B.C.: Surface dressing—H. V. Smith and Co., Ltd., Walkden House, 3-10 Melton Street, London, N.W.1; heating and planing—Non Impact Surfaces, Ltd., Ibex House, Minories, London, E.C.3; resurfacing school playgrounds and paths in parks and cemeteries—Situsec, Ltd., 46 Grays Inn Road, London, W.C.1; asphalt maintenance — George Wimpey and Co., Ltd., Hammersmith Grove, London, W.6 (recommended).

SEWERAGE, SEWAGE AND REFUSE DISPOSAL

Blaby, Leics. — Braunstone sewage disposal works extensions, for R.D.C., comprising five 38ft. diameter circular reinforced concrete settling tanks; three 32 sq. ft. reinforced concrete digestion tanks; one 70ft. diameter percolating filter in blue brickwork; three earth sludge lagoons; two pumping stations; one agricultural implement store, together with concrete roadworks, sideworks and appurtenant works. F. W. James, engineer and surveyor: J. A. Stirling, Ltd., Fretherne Chambers, Welwyn Garden City, Herts., £78,429. Work commencing early May.

Cobham, Surrey. — Construction of sewage disposal system at Woodlands Park, for Middlesex C.C.: Bridgewater Bros., Ltd., 97 East Street, Epsom, £14,439 (recommended).

Dorchester. — Laying of a new 9in. feeder water main, for B.C.: Wm. Press and Son, Ltd., Abbey Grounds, Abingdon, Berks., £6,785 (recommended).

Droxford, Hants.—Bishop's Waltham sewerage and sewage disposal scheme, contract 1, for R.D.C., comprising the construction of about 11 miles of 15in., 12in., 9in. and 6in. diameter concrete and stoneware sewers, manholes and laterals, together with sewage disposal works, pumping station and 8in. diameter spun-iron pumping main, together with all works incidental thereto. Lemon and Blizard, consulting engineers, Telford House, Hulse Road, Southampton: Southern Counties Construction Co., Ltd., 204 London Road, Waterlooville, Hants £212,171. Work commencing May 1.

Fareham, Hants.—Western Wards main drainage, for U.D.C., comprising the construction of approximately 10,300 lin. yd. of 6in. to 24in. diameter stoneware, concrete and spun-iron pipe sewers including a tidal outfall together with the necessary manholes, etc.; the construction of a screening and disintegrator station and a small pumping station in reinforced concrete and all appurtenant works. Waterhouse and Rounthwaite, consulting engineers, 165 Westmorland Road, Newcastle upon Tyne, 4: Surface Maintenance Services, Ltd., Durham House, 124 Old Christchurch Road, Bournemouth, £194,777.

Harrogate, Yorks.—Following sewerage works, for B.C.: Scheme G.8—Reconstruction of foul sewer, Stonefall Cottages to Wedderburn Drive—Ruddock and Meighan, Ltd., Broom Royd Wood, Rockley Lane, Worsborough Bridge, £15,278; scheme G.9—foul sewer diversion, Knaresborough Road to Wedderburn Drive; scheme G.13—Bilton Lane s.w. sewer; scheme A.4 (i) and (ii)—reconstruction of s.o. sewer from Fulwith Mill Lane to Pannal—Walter G. Birch (Harrogate), Ltd., Montpellier House, Cold Bath Road, Harrogate, £9,203, £5,425 and £14,954, respectively (all recommended, subject to Ministry approval).

Inverness-shire. — Following, for C.C.: Construction of two burn intakes, combined filter and storage tank and laying of about five miles of 6in. diameter to 1½in. diameter asbestos-cement pipes at Aviemore, and the supply and laying of about 1,200yd. of 6in. and 9in. f.c. and a.c. sewers at Portree: Aviemore—Alex. Robertson and Co., Ltd., Caigluscar Road, Dunfermline; Portree—Gordon Brawn, Mallaig (both recommended).

Keighley, Yorks.—Construction of the Morton-Riddlesden outfall sewer, for B.C. Work comprises approx. 1,052yd. of concrete, cast-iron and steel pipe sewer varying from 14in. to 30in. dia., together with manholes, and ancillary work, including a small lattice girder bridge over the River Aire. R. C. Gibson, borough engineer: B. B. Kirk and Co., Ltd., Keighley Road, Skipton. Work commencing May.

Kingsclere and Whitchurch, Hants.—Extension of the sewer in Micheldever Road and provision of new pumping station, for

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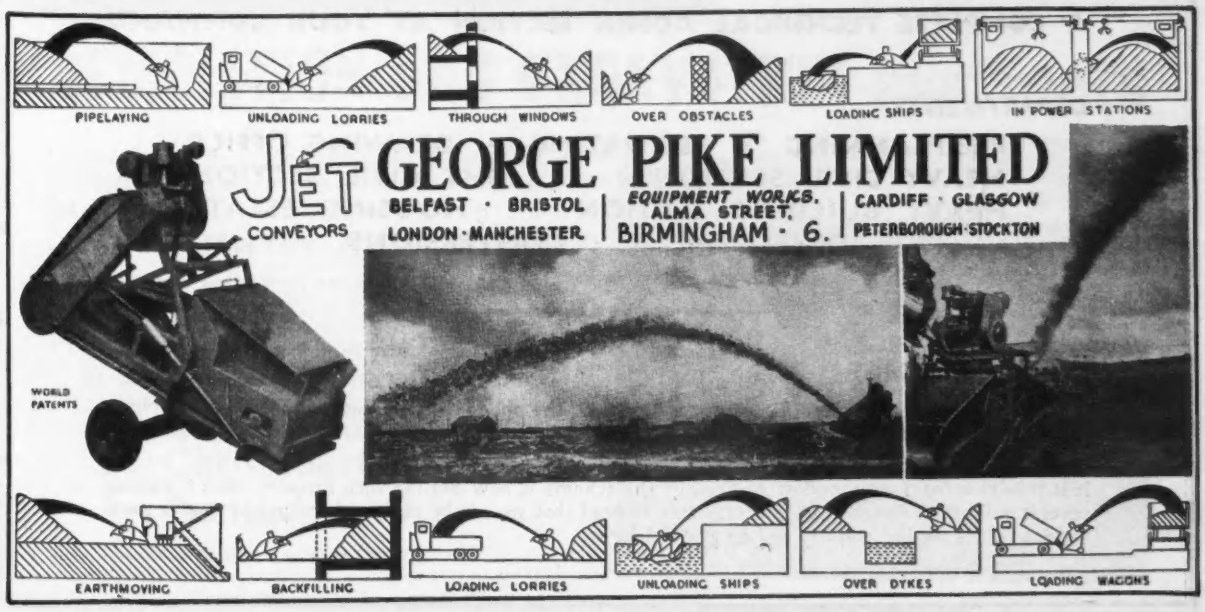

R.D.C. Lemon and Blizard, consulting engineers, Telford House, Hulse Hill. Southampton: Southern Counties Construction Co., Ltd., 204 London Road, Waterlooville, Hants, £7,896 (accepted); James Crockerell, Ltd., £8,163; Bridgwater Bros., Ltd., £8,235; Tilbury Construction Co., Ltd., £8,290; Sydney Green and Sons, Ltd., £9,280. Work commenced.

Market Harborough, Leics.—Laying of sewers at Mowsley, Laughton and Gumley, the construction of a joint sewage disposal works for the villages of Mowsley and Laughton, and the construction of a sewage disposal works at Gumley, for R.D.C., including the laying of about 3,200yd. of 9in. and 6in. diameter sewers at Mowsley and Laughton, and the laying of about 800yd. of 6in. diameter sewers at Gumley, together with manholes and house connections. Pick, Everard, Keay and Gimson, consulting enginers, 6 Millstone Lane, Leicester; Joseph Webster, Ltd., Narborough, Leicester (Mowsley and Laughton), £30,042, and (Gumley), £11,304.

Melton and Belvoir, Leics. — Construction of Bottesford sewerage scheme, for R.D.C.: W. J. Roberts (Bottesford), Ltd., Bottesford, Notts., £99,968.

Stockport-on-Tees, Dur.—Relief sewer at Junction Road, for B.C.: G. Cowan, borough engineer: T. R. Illingworth and Co., Ltd., Peterlee, Co. Durham, £16,194.

West Hertfordshire. — Chorleywood relief sewer, stage II, contract E.16, for Main Drainage Authority. John Taylor and Sons, consulting engineers, Artillery House, Artillery Row, Victoria Street, Westminster, S.W.1: William Old, Ltd., 433 Pinner Road, Harrow, Middx., £86,324.

STREET LIGHTING

Dewsbury, Yorks. — Supply of steel columns for year 1960-61, for B.C.: Abacus Engineering, Ltd., Russell Chambers, King Street, Nottingham.

Gosport, Hants.—Installation of group B lighting in nine roads, for B.C.: Southern Electricity Board, £2,356 (recommended).

Northampton.—Floodlighting of the Northampton County Ground, for County Cricket Club: Provision of electrical equipment—General Electric Co., Ltd., 32a Newland, Northampton; excavating and preparation of the power station—T. Wilson and Son, Ltd., 65 Sheep Street, Northampton. Estimated cost £13,000.

Nottinghamshire. — Street lighting, London-Edinburgh - Thurso trunk road, A.1; Doncaster By-pass (Notts. section), lighting of traffic island, north of Blyth; supply and erection of 400-watt Mercury lanterns on steel columns, for C.C.: Abacus Engineering, Ltd., Russell Chambers, King Street, Nottingham.

Ossett, Yorks.—Street lighting programme for year 1960-61, for B.C.: Engineering and Lighting Equipment Co., Ltd., Sphere Works, St. Albans, Herts., £5,817.

GOVERNMENT CONTRACTS

Air Ministry.—Contracts to the value of £500 or over for the week ended April 8:

Building work: Abingdon, Berks.—T. H. Kingerlee and Sons, Ltd., 35a Queen Street, Oxford; Colerne, Wilts.—S. W. Foster, Ltd., Coombend, Radstock, Bath, Somerset; Benson, Oxon — Stanley Hugh Leach, Ltd., 231-231a Yeading Lane, Hayes, Middx.; Biggin Hill, Kent—Woodcock Marshall and Co., Ltd., 2 Westbourne Grove Mews, London, W.11; Feltwell, Norfolk—T. Gill and Son (Norwich), Ltd., Hall Road, Norwich, Norfolk; Middleton St. George, Co. Durham—F. Shepherd and Son, Ltd., Blue Bridge Lane, Yorks.

Road construction: Llanbedr, Merionethshire—F. Parkinson and Sons, Ltd., Mowbray Drive, Blackpool, Lancs.; Brizlee Wood, Northumberland—George Wimpey and Co., Ltd., Hammersmith Grove, London, W.6.

Resurfacing taxiway, etc.: Waterbeach, Cambs.—Chittenden and Simmons, Ltd., Ditton Park, Larkfield, Maidstone, Kent.

Concrete foundations, etc.: Watton, Norfolk—Walter Lawrence and Son, Ltd., Ventnor House, London Street, Swaffham, Norfolk.

Modifications to heating systems, etc.: Prestwich Airport, Ayrshire — Richard Crittall and Co., 136 Wellington Street, Glasgow, C.2.

Collection, removal and disposal of oil, etc., from oil traps: R.A.F. and U.S.A.F. Stations within Headquarters, Air Ministry Directorate General of Works, 8 Works Area, block D, Brooklands Avenue, Cambridge—Tovey Transport, Ltd., 26 Romsey Terrace, Mill Road, Cambridge.

Artificers' work: Sennen (Cornwall), etc. Dudley Coles, Ltd., 13-16 Bath Street, Plymouth, Devon; Hawkinge (Kent), etc.—J. J. Clayson and Son, Ltd., Lyminge, Folkestone, Kent.

Metropolitan Police.—Recent contracts placed include:

Alterations, Thornton Heath District Garage—A. N. Billings, Ltd., £1,498.

Internal redecorations, Buxton House, Snaresbrook, E.11—W. Oddy, Ltd., £2,640.

Internal redecorations, Pondfield House, Clifton Gardens, W.9—Websters (Builders), Ltd., £1,711.

Internal redecorations, Trenchard House Section House—J. Poore and Sons, Ltd., £6,100.

Ministry of Works.—Contracts placed for week ended April 1:

Bedfordshire: Ministry of Aviation, Storage Depot, Elstow—supply and erection of hoist block—C. Hutton and Co., Ltd., 9 Station Road, Bletchley, Bucks.; Head Post Office, Luton—internal painting and cleaning—Carter and Simpson (Builders), Ltd., 89 Stuart Street, Bedford.

Berkshire: Telephone Exchange Centre, Bracknell—erection—Collier and Catley Ltd., King's Meadow Road, Reading.

Buckinghamshire: Telephone Exchange, New Street, Aylesbury—painting and pointing—J. J. Hamilton and Sons, Ltd., 4 Perrin Street, Headington, Oxford.

Derbyshire: Hardwick Hall Camp, Chesterfield—demolition of W.D. acommodation—J. J. Gallagher, Ltd., 28 Lea Road, Birmingham, 11.

East Lothian: Head Post Office, Dunbar—reconstruction—R. Banks and Son, 133 Iveresk Road, Musselburgh.

Glamorgan: Joint Office Building, Water Street, Neath—extension—Griffith Davis and Co., Ltd., Paxton Yard, Swansea.

Lanarkshire: Reception Centre, Airport, Bishopbriggs—alterations—Wm. Crawford and Son (Contractors), Ltd., 10 Minerva Street, Glasgow, C.3.

Lancashire: Telephone Exchange, Wilmslow Road, Didsbury—erection—P. Hamer, Ltd., Park Street, Swinton; Post Office Motor Transport Workshops, Collins Road, Bamber Bridge—roof work — F. Parkinson, Ltd., Mowbray Drive, Blackpool.

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London: British Museum, W.C.1—installation of electrical equipment—Brush Electrical Engineering Co., Ltd., Loughborough, Leics.; 103 Oxford Street, W.1—adaptations—E. J. Lacy and Co., Ltd., Steele Road, N.W.10

Middlesex: Telephone Exchange, Ashford—erection—Farrans, Ltd., 33 Upper Brook Street, W.1; Head Post Office, College Road, Harrow—erection (second stage)—B. Sunley and Sons, Ltd., 25 Berkeley Square, W.1.

Northumberland: Telephone Exchange, Morpeth—erection—R. W. Bell and Co. (Contractors), Ltd., Mistletoe Road, Jesmond, Newcastle upon Tyne; Ministry of Agriculture, Kenton Bar, Newcastle upon Tyne—renewal of bituminous felt roofing—Val de Travers Asphalte, Ltd., Chain Bridge Road, Blaydon, Durham.

Nottinghamshire: Ministry of Health Hospital, Rampton—adaptations—R. Moore and Son (Sheffield), Ltd., Spencer Street, Mansfield.

Pembrokeshire: Post Office, Hawthorn Rise, Haverfordwest—erection of engineering depot—Gee, Walker and Slater, Ltd., Coychurch Road, Bridgend, Glam.

Somerset: Post Office Radio Station, Goosemoor—erection — Stansell and Son (Taunton), Ltd., Billet Street, Taunton; Post Office Radio Station, East Harptree—erection—Stone and Co. (Bristol), Ltd., Redland Road, Bristol, 6.

Staffordshire: Ministry of Pensions and National Insurance, Pinfold Street, Darlaston — alterations — W. Neeman (Contractors), Ltd., 207 Spon Lane, West Bromwich; Joint Office Building, Little Newport Street, Walsall — adaptations—St. Ledger and Co., Cannock Road, Willenhall.

Stirlingshire: Government Building, Station Road, Kilsyth—erection—J. B. Bennett (Glasgow), Ltd., 26 Market Street, Kilsyth.

Surrey: Ordnance Survey Office, Hinchley Wood — rearrangement of studios W. and M. Negus, Ltd., King James Street, S.E.1.

Wiltshire: Tidworth Garrison—provision of petrol pumps and tanks—Avery-Hardoll, Ltd., Oakcroft Road, Chessington, Surrey.

Worcestershire: Head Post Office, Stourbridge—reconstruction—D. B. Evans (Bilston), Ltd., Oxford Street, Bilston, Staffs.

Contracts placed for week ended April 16:

Aberdeenshire: Post Office Radio Station, Granite Hill, Aberdeen— erection—Donald C. Stewart, 38 Ellon Road, Bridge of Don, Aberdeen.

Buckinghamshire: Telephone Exchange, High Street, Langley—erection — W. S. Try, Ltd., High Street, Cowley, Uxbridge, Middx.

London: British Museum, W.C.1—repairs to glazed roofs, etc.—Helliwell and Co., Ltd., 24 Ashley Place, S.W.1; Government Offices (Zone 16), S.W.1 — modernisation and internal painting — Howe and White, Ltd., 35 Manor Road, Wallington, Surrey; Sub-district Office, Charlton, S.E.7—erection—Thomas and Edge, Ltd., 52 Macbean Street, Woolwich, S.E.18; Royal Naval College, Greenwich, S.E.10 — electrical installation—Walker Clinging and Co., 16 Perry Hill, Catford, S.E.6; Mount Pleasant Letter Office Block, E.C.1—fire precaution work—T. G. Waterman, Ltd., 187-9 Whitechapel Road, E.1.

Yorkshire: Royal Air Force Station Airfield, Pollington, Snaith—resurfacing roads—Norman W. Dunn and Co., Ltd., 1 East Mount Road, York.

Post Office.—Contracts for duct laying, etc., works to the value of £500 and over placed during the week ended April 9:

Brennan Bros., 48 Falkner Street, Gloucester; C.D.L. Construction Co., Ltd., Church Road, Egham, Surrey; Christie and Co. (Contractors), Ltd., Raemoir Road, Banchory, Kincardineshire; A. R. Cleghorn and Co., Ltd., 34-36 Harvey Lane, Norwich; James Cooper (Construction), Ltd., 28 Kensington Church Street, London, W.8; F.H.M. Contractors, Ltd., Brook Lane, Newcastle, Staffs.; George H. Graham (Contractors), Ltd., District Bank Chambers, Market Street, Huddersfield, Yorks.; Henry Hemmings, Ltd., 129 Brigstock Road, Thornton Heath, Surrey; Jennings and Geary (Contractors), 10 Fortfield Road, Knowle, Bristol, 4; William MacNamara, Kerrsland, 477 Georgie Road West, Edinburgh, 11; May Gurney and Co., Ltd., Trowse, Norwich; J. Murphy and Sons, Ltd., 43 Charteris Road, Finsbury Park, London, N.4; The Norwest Construction Co., Ltd., Litherland, Liverpool, 21; William Press and Son, Ltd., 22 Queen Anne's Gate, Westminster, London, S.W.1; D. J. Sullivan (Bristol), Ltd., 16 Burlington Road, Redland, Bristol, 6; Alexander Sutherland, Ltd., Main Street, Golspie, Sutherland; The Tele-Construction Co., Ltd., 18-20 Beaumont Road, Leyton, London, E.10; G. Turner and Son, Ltd., Hauxton Mill, Cambridge.

War Department.—Contracts placed for week ended April 1:

Berkshire (Didcot): grass cutting—E. Doe and Sons (Contractors), Ltd., Ongar.

Devon (Tavistock and Barnstaple): roadwork—W. and J. Glossop, Ltd., Exeter.

Co. Down (Holywood): building—Baird Bros., Belfast.

Essex (Shoeburyness): roadwork—W. and C. French, Ltd., Romford.

Gloucestershire (Ashchurch): repairs to boilers—G. H. Marshall, Ltd., Reading.

Hampshire (Aldershot): water supply—C. H. Kempton and Co., Ltd., London; building—Sherfields (Farnham), Ltd., Farnham.

Kent (Chatham): building—Medcesters, Ltd., Gillingham.

Middlesex (Hounslow): building — H. Goodsell and Son, Ltd., Maidstone; (Dreghorn and Glencorse): miscellaneous—John Roxby Surtees, Ltd., Blackhill, Co. Durham.

Somerset (Watchet): miscellaneous—C. H. and G. Batten, Minehead.

Shropshire (Donington): relaying steam mains—D. B. Evans (Bilston), Ltd., Bilston.

Yorkshire (Catterick): painting and decorating — Reid Bros., Carlisle; J. D. Tighe and Co., Kirton Lindsay; building—M. J. Gleeson (Contractors), Ltd., Sheffield, 8.

Contracts placed for the week ended April 8:

Dorset (Bovington): water supply—Benham and Sons, Ltd., Bournemouth; (Blandford): grass cutting — G. O. and W. L. Watts (Grazeley), Ltd., Calcot, Reading.

Oxfordshire (Bicester): grass cutting—Surface Maintenance Services, Ltd., Bournemouth.

Warwickshire (Kineton): building—Lewis and Watters, Ltd., Leamington Spa.

Wiltshire (Ludgershall): roadwork—Blackford and Son (Calne), Ltd., Calne; (Devizes): grass cutting—J. V. Strong and Co., Ltd., Marlborough.

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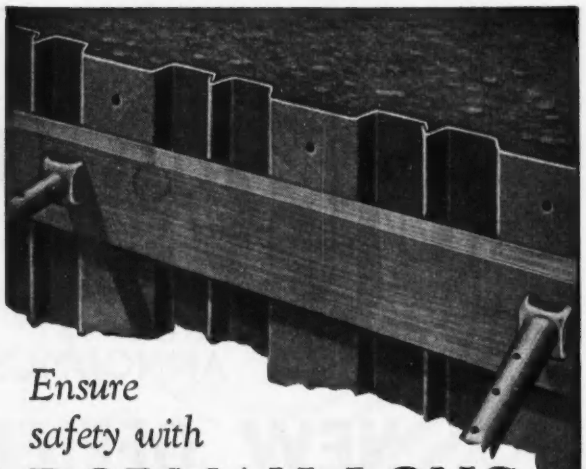

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6" x 12" B.S. Fig. 1	Rectangular Bullnose	10
5" x 10" " " 2	" "	15
4" x 10" " " 3	" "	18
6" x 12" " " 4	Splayed Section	10
5" x 10" " " 5	" "	16
6" x 12" " " 6	Half Batter Section	10
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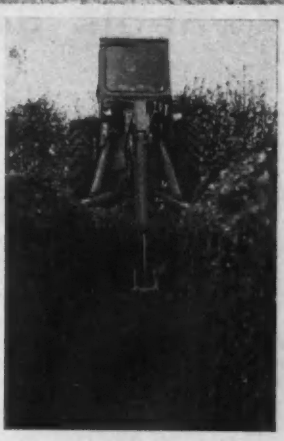

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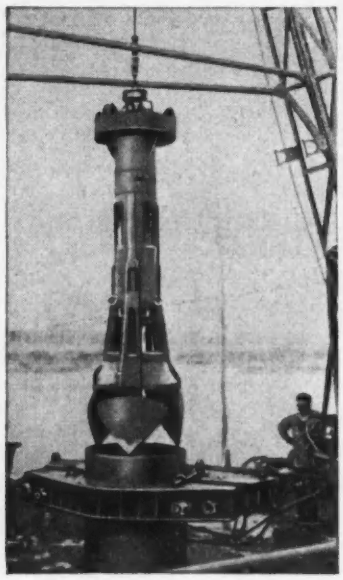

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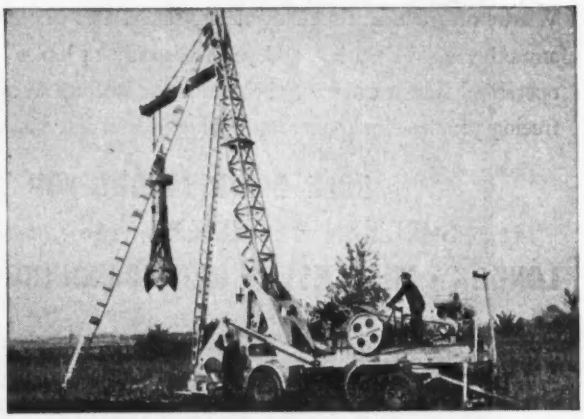
BADE Single Rope Hammer Grabs

Model	Cutting dia. of crown	Max. Boring dia. approx.	Number of blades	Dia of guide ring	Weight		Min. dia. of tubes	
					of Grabs approx.	Hooking crown	O.D. inch	I.D. inch
E-32-2	14½"	17½"	3	-	1720lbs.	187lbs.	16½"	15 5/16"
	16½"	20½"		-	1764lbs.		18½"	17½"
	20½"	25½"		18½"	1841lbs.		22½"	21½"
	24½"	29½"		21½"	1962lbs.		26"	24½"
E-43-2	28½"	33½"	3	24½"	2866lbs.	243lbs.	30½"	29½"
	38½"	43½"		32½"	3307lbs.		39½"	38½"
	47½"	59"		43½"	4410lbs.		50"	48"



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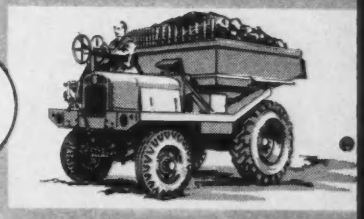

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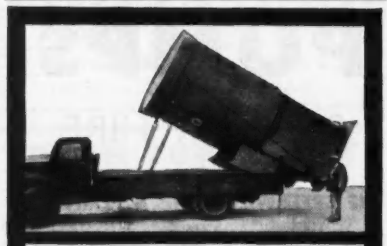

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WANTED BY CONTRACTOR.
Two 19RB EXCAVATORS, with Shovel or Dragline Equipment.
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One Caterpillar D9.
Three DW21s.
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Three Caterpillar D7 Hydraulic ANGLEDOZERS, Model 3T.
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J.C.B. Hydra-Digga, all equipments.
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Ruston 10RB Crowd Shovel, Skimmer and Backacter, £1,000.
Ransomes and Rapier 423, ⅝yd. Dragline, electric start, £800.
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Priestman Wolf, Skimmer or Dragline, Dorman Engine, electric start, £690.
All above in full working order and subject to any test at these works.
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Smith 2/10 BACKACTER BUCKET only, £50.
Smith 2/10 DERRICKING GEAR, £30.
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Package deal—Do-it-yourself Quarry Plant, comprising 25in. x 16in. Crusher, Lister Diesel Power Pack (new) and enough 6ft. x 3ft. steel section (new) to make 120 cu. yd., four-compartment storage bin, £650.
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Deepcar is six miles west of Sheffield, on A.616 (Woodhead Road).

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Selection from our comprehensive fleet of Modern Plant for immediate delivery:
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18-ton Brownhoist, Shunter, 50ft. jib.
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10-ton Grafton, Diesel, 34ft. jib.
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5-ton Grafton, new Diesel conversion, 35ft. jib.
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Coles 5-ton, Mark 7, on Thornycroft Diesel chassis.
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Coles 4-ton, Diesel/Electric, new engine.
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7-ton Anderson-Grice, 100ft. jib, 400/3/50
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Stephenson Diesel Locos., 150-h.p. (two).
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Caterpillar D9, 19A934, fitted with 29 C.C.U., checked over and repainted, £7,750.
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Euclid S7, B2558, Scraper, reconditioned, £3,500.
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L.T. 6yd. SCRAPER, twin wheels all round, £50.
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OP.208.—One Second-hand 19RB EXCAVATOR, Serial No. 14191, powered by Ruston 4VROHM Diesel Engine. Machine can be supplied with either Skimmer/Backacter or Dragline Equipments. £2,600.
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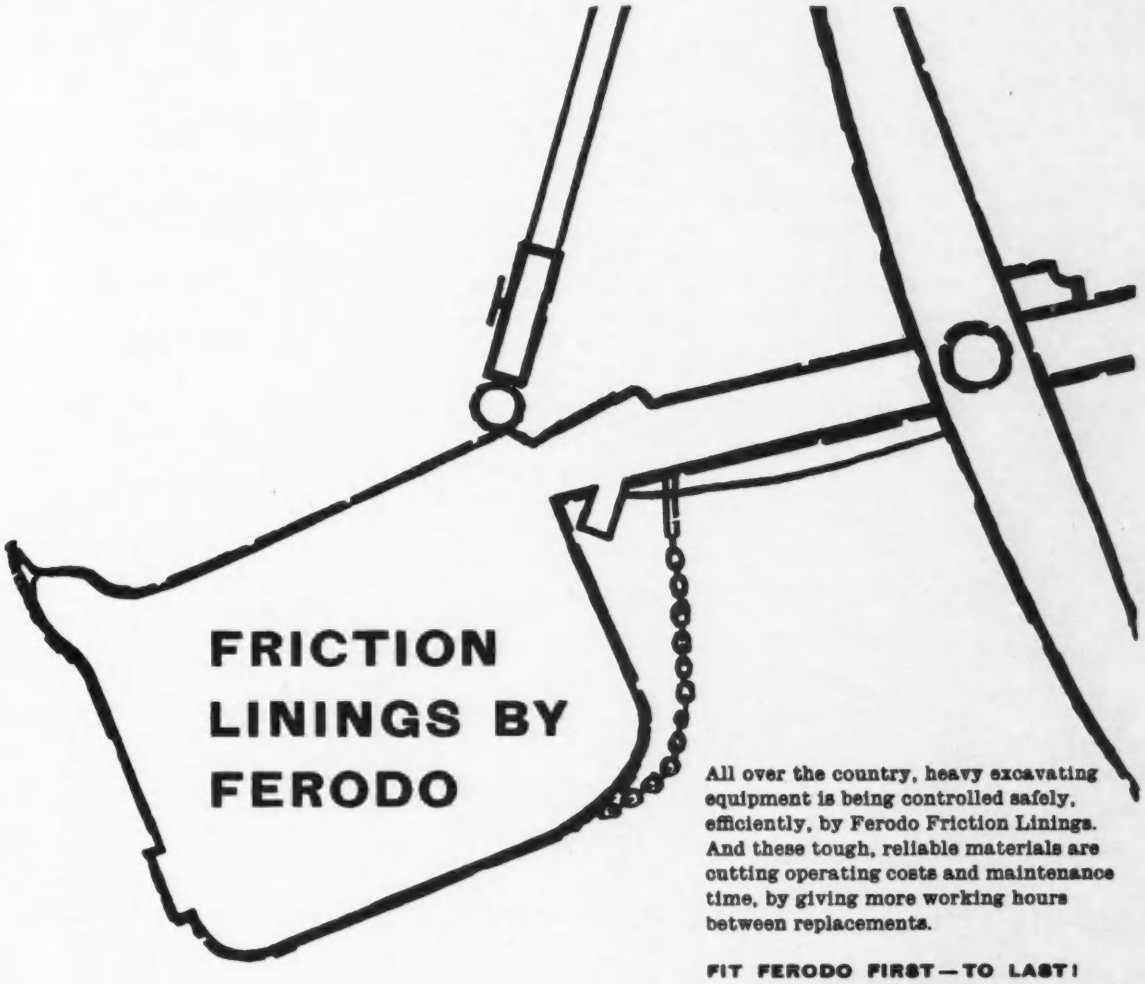

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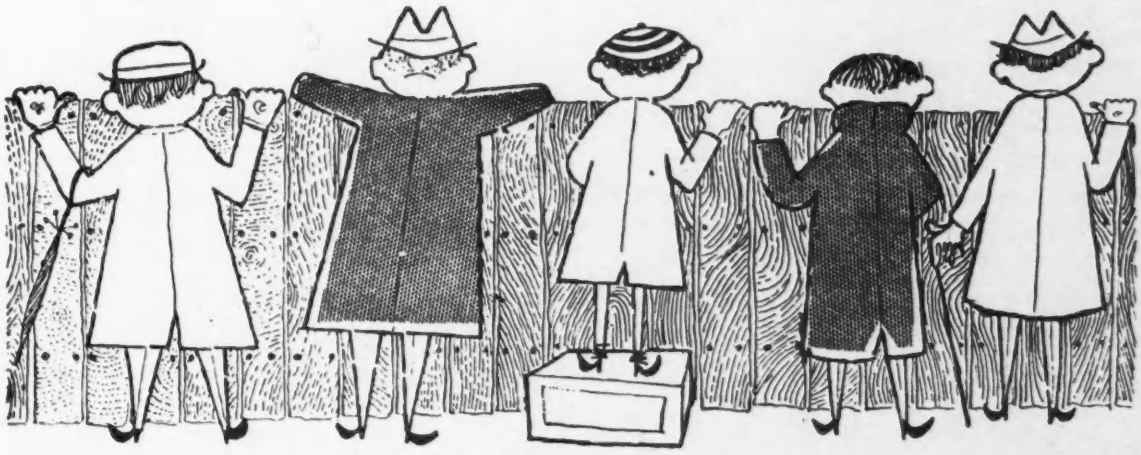

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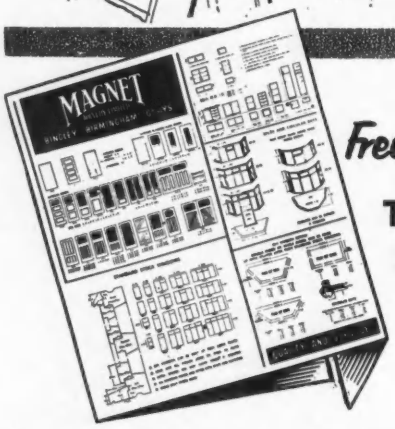

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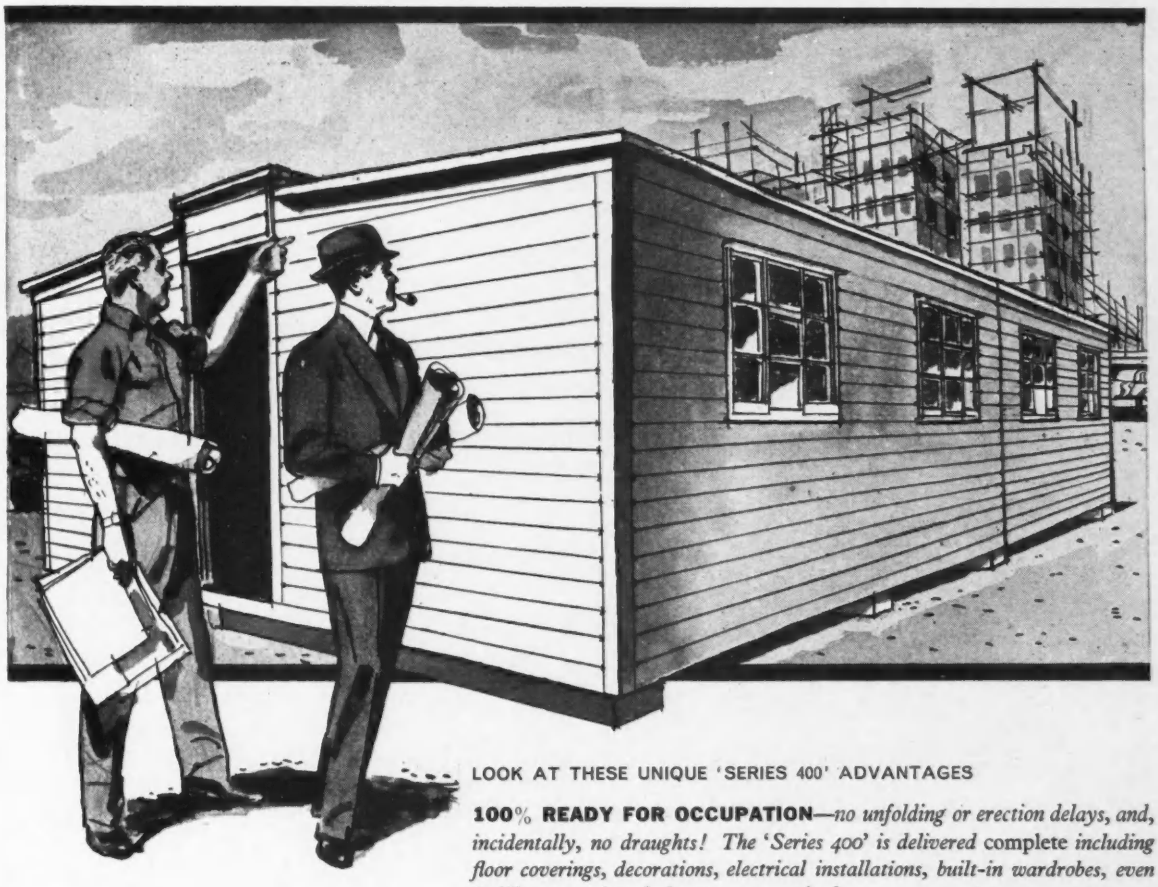

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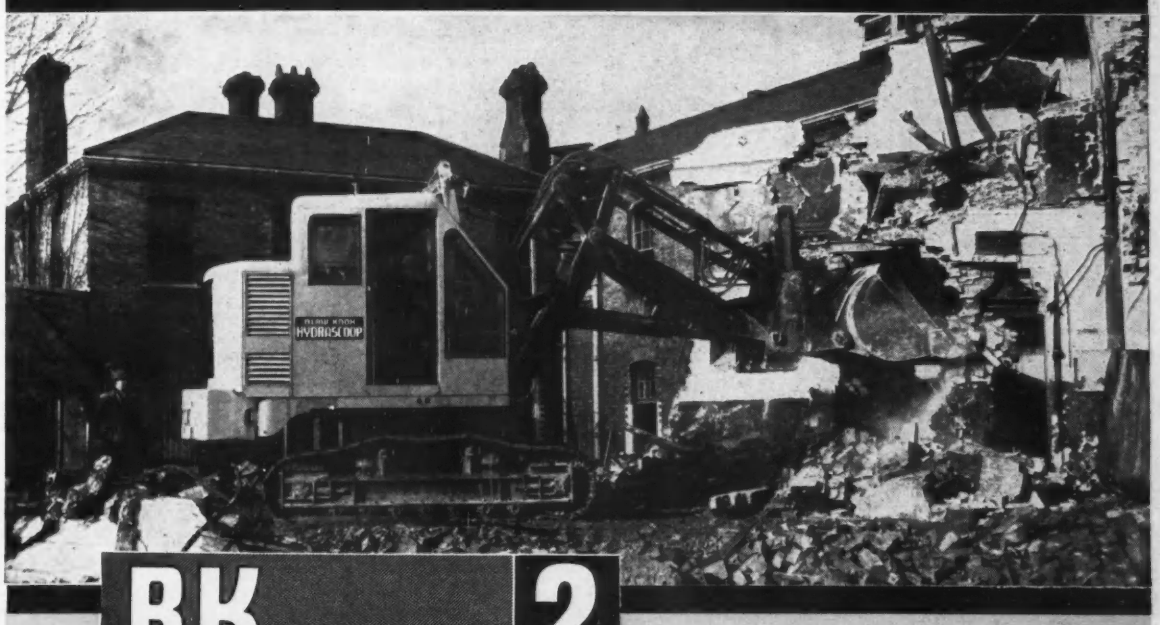

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- 2-wheel or 4-wheel Drive.
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2 CU. YD. BUCKET

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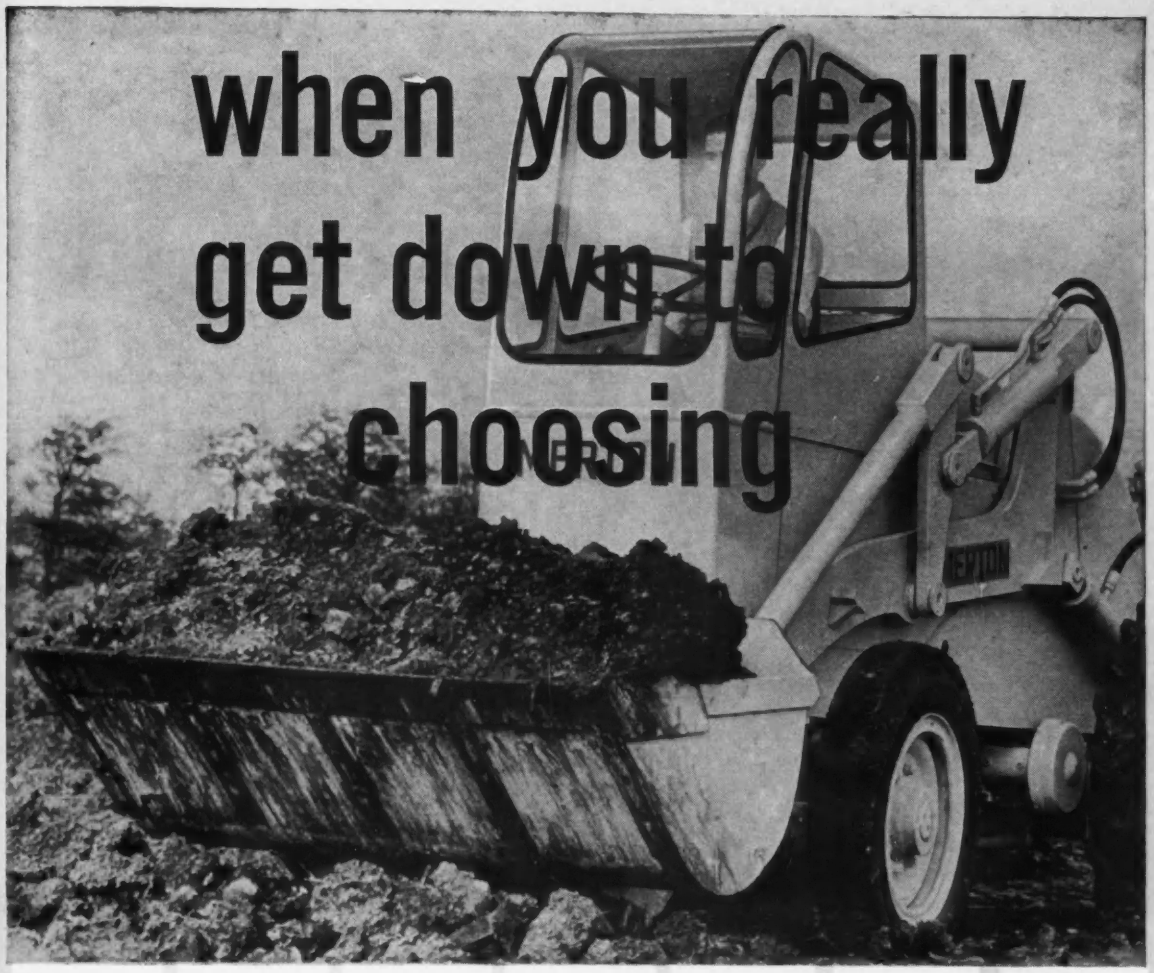

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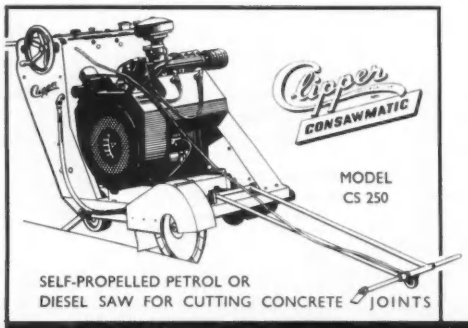

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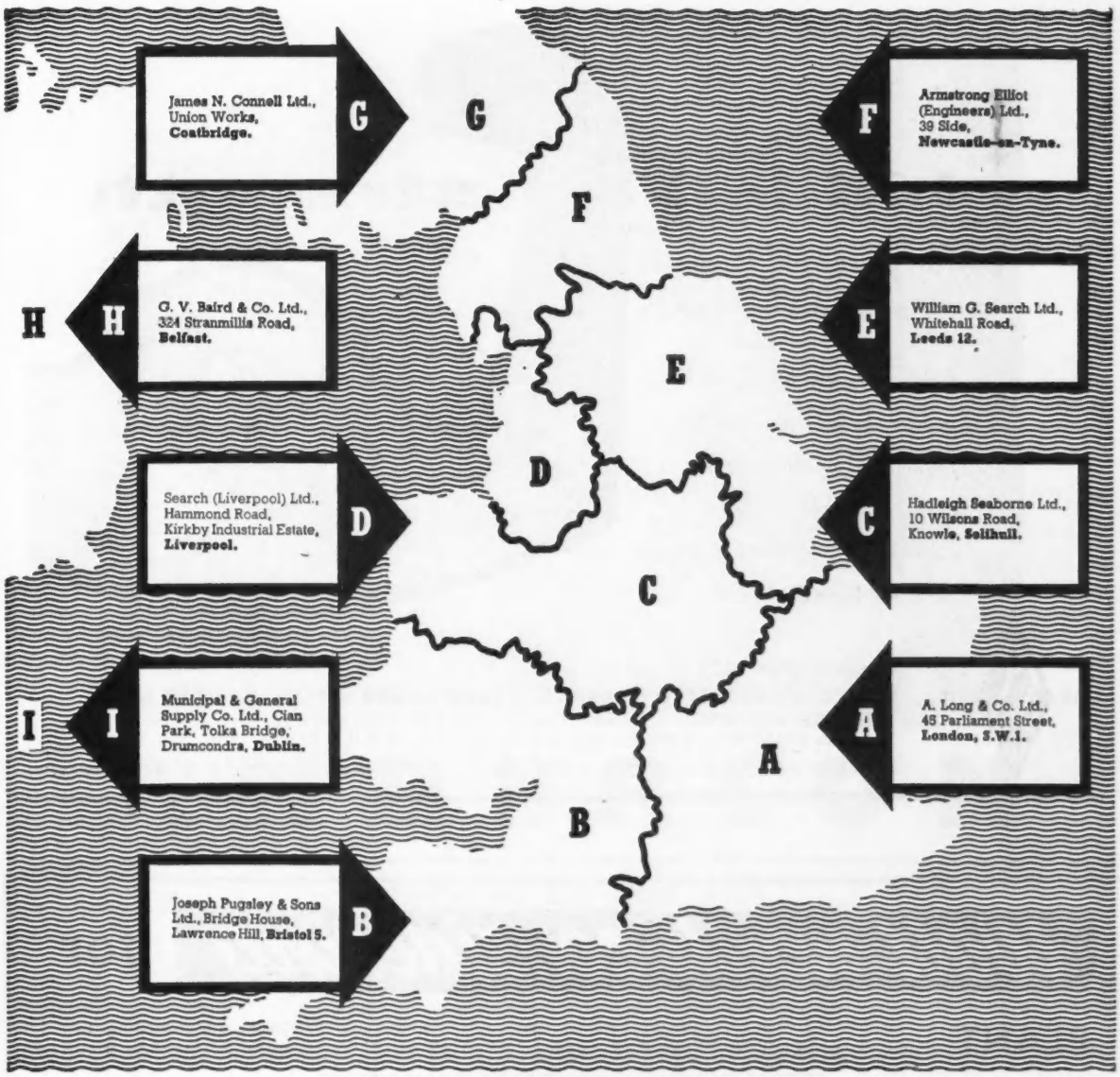

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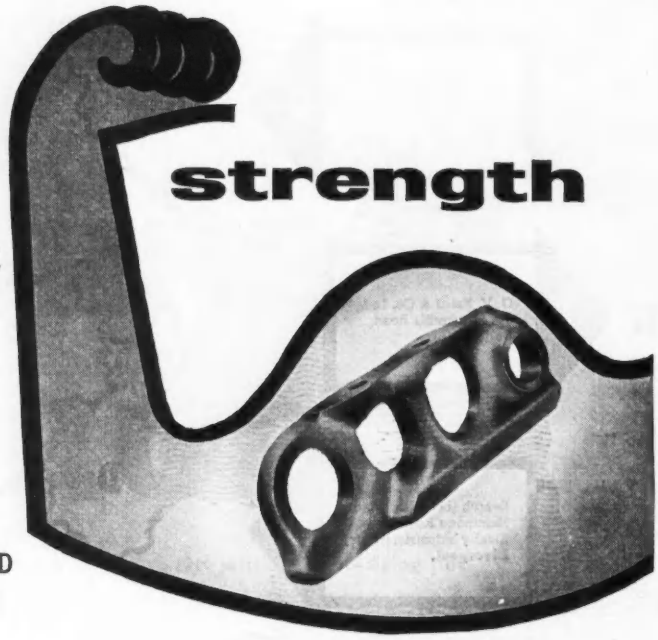

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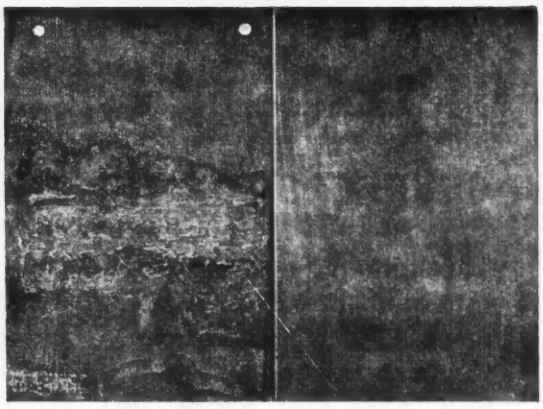

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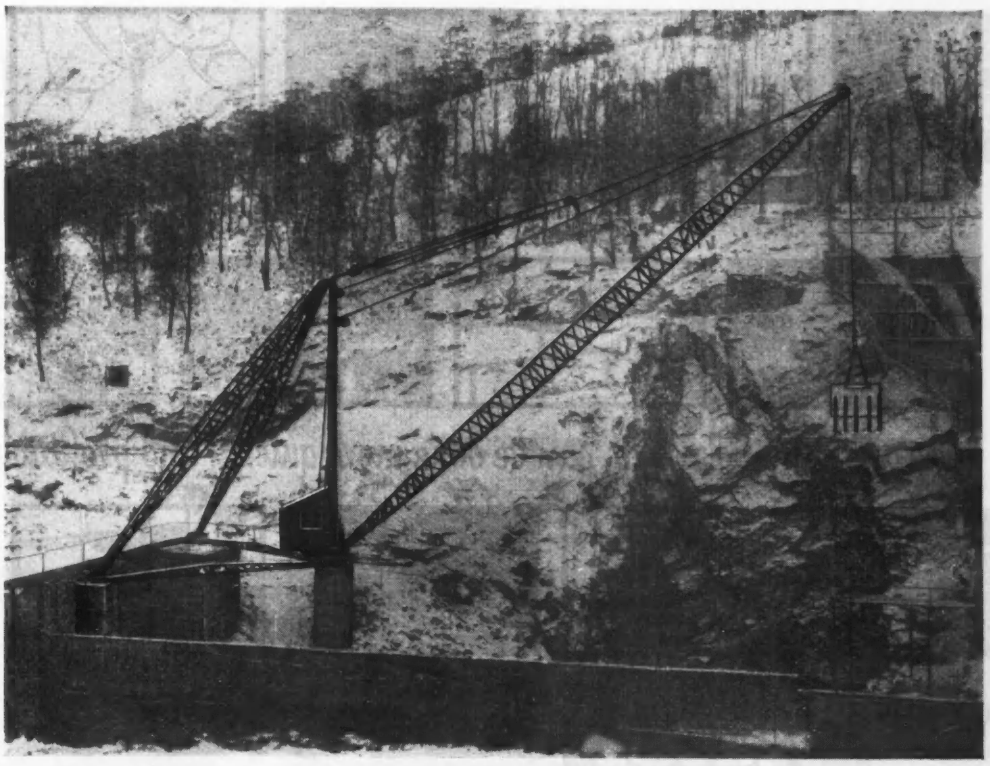

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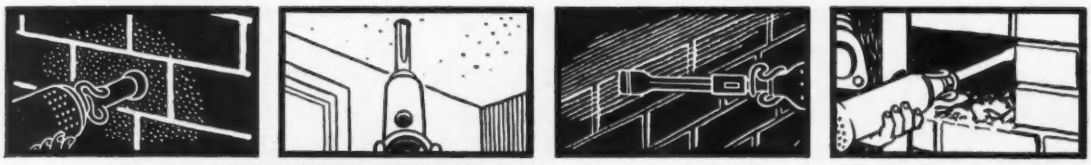

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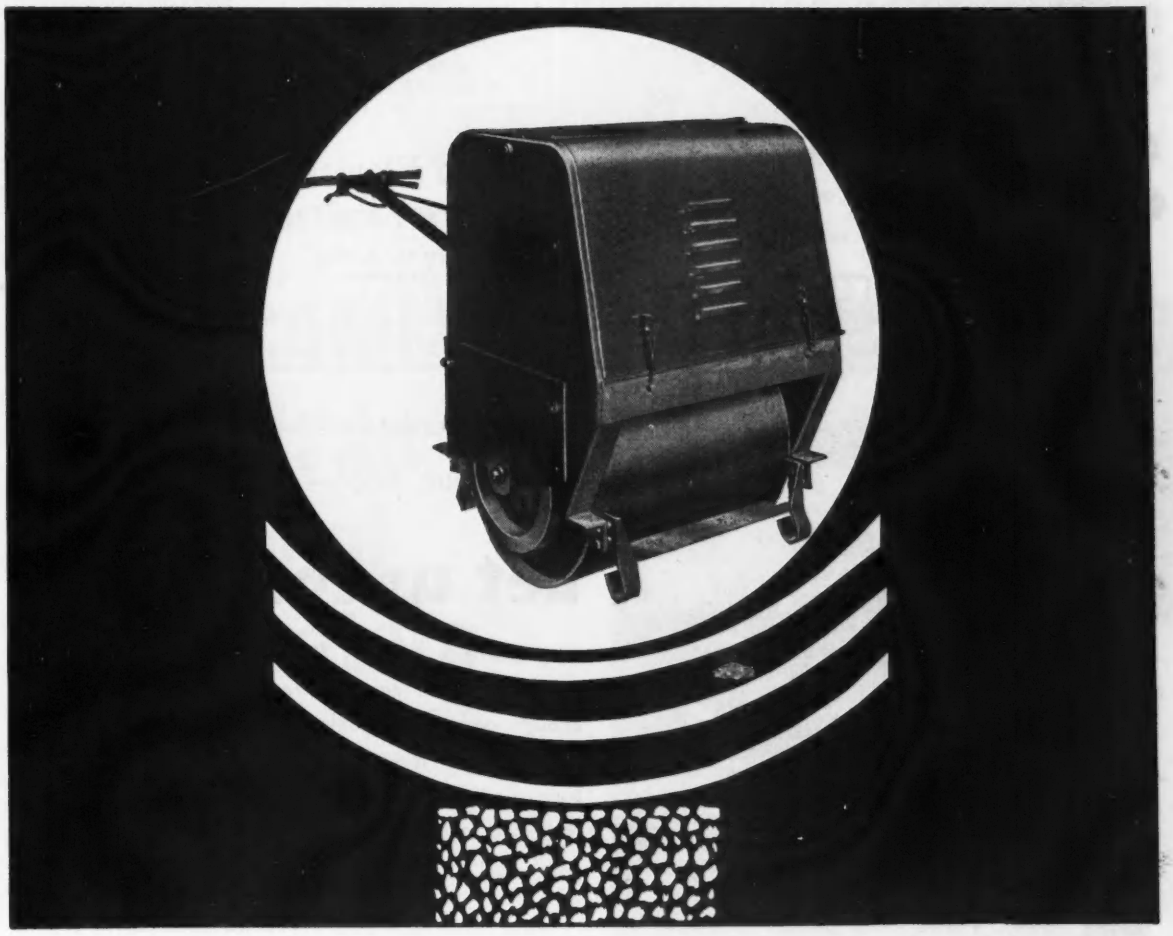

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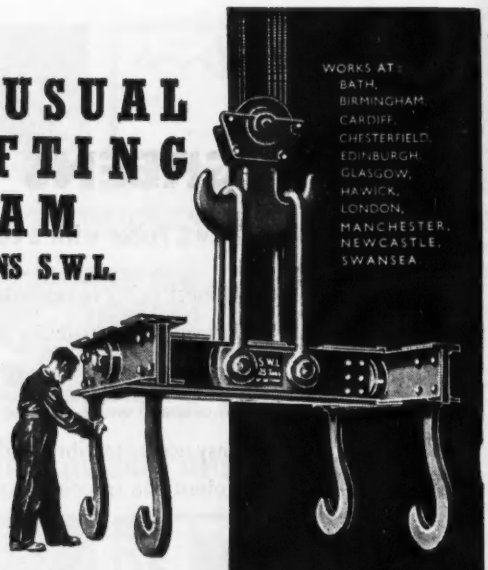
25 TONS S.W.L.



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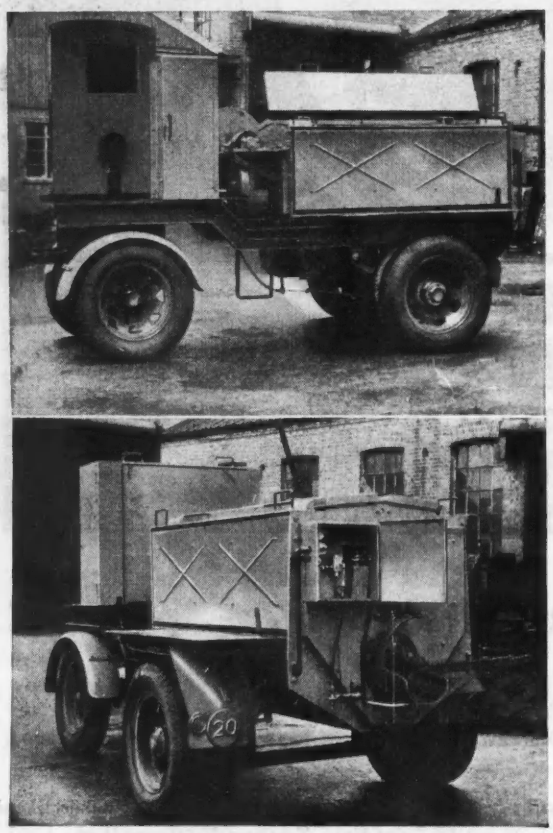

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"This SCAMMELL is worth an additional 3 excavators"

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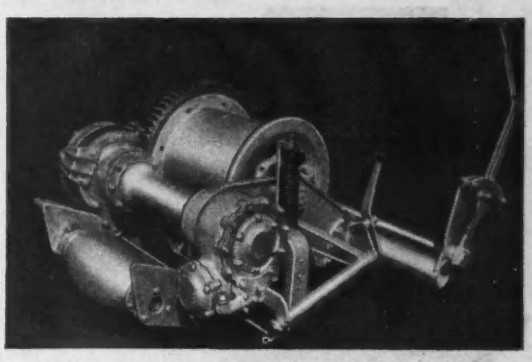

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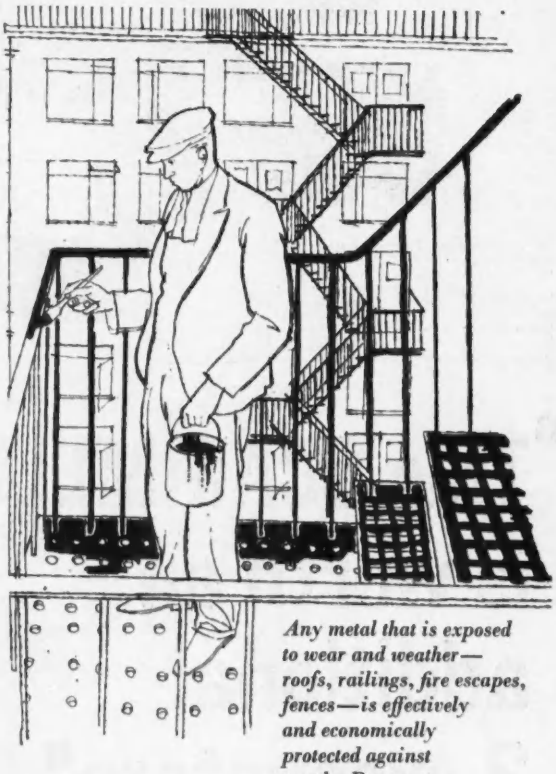

Any metal that is exposed to wear and weather—roofs, railings, fire escapes, fences—is effectively and economically protected against rust by Presomet.

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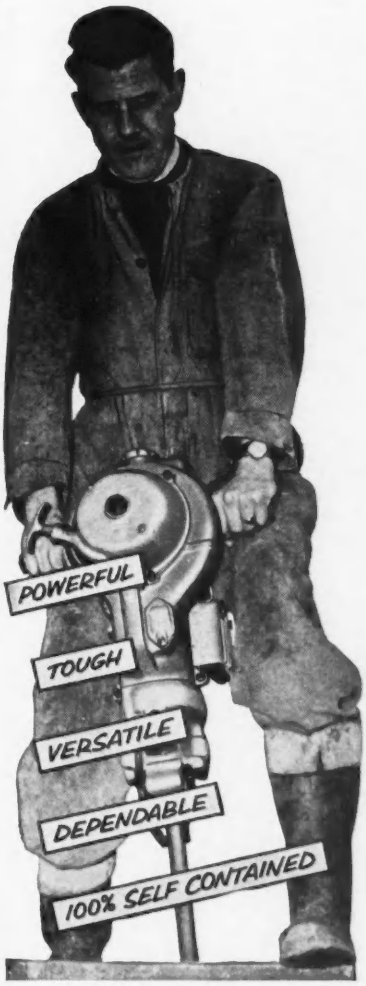

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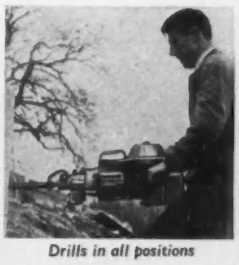
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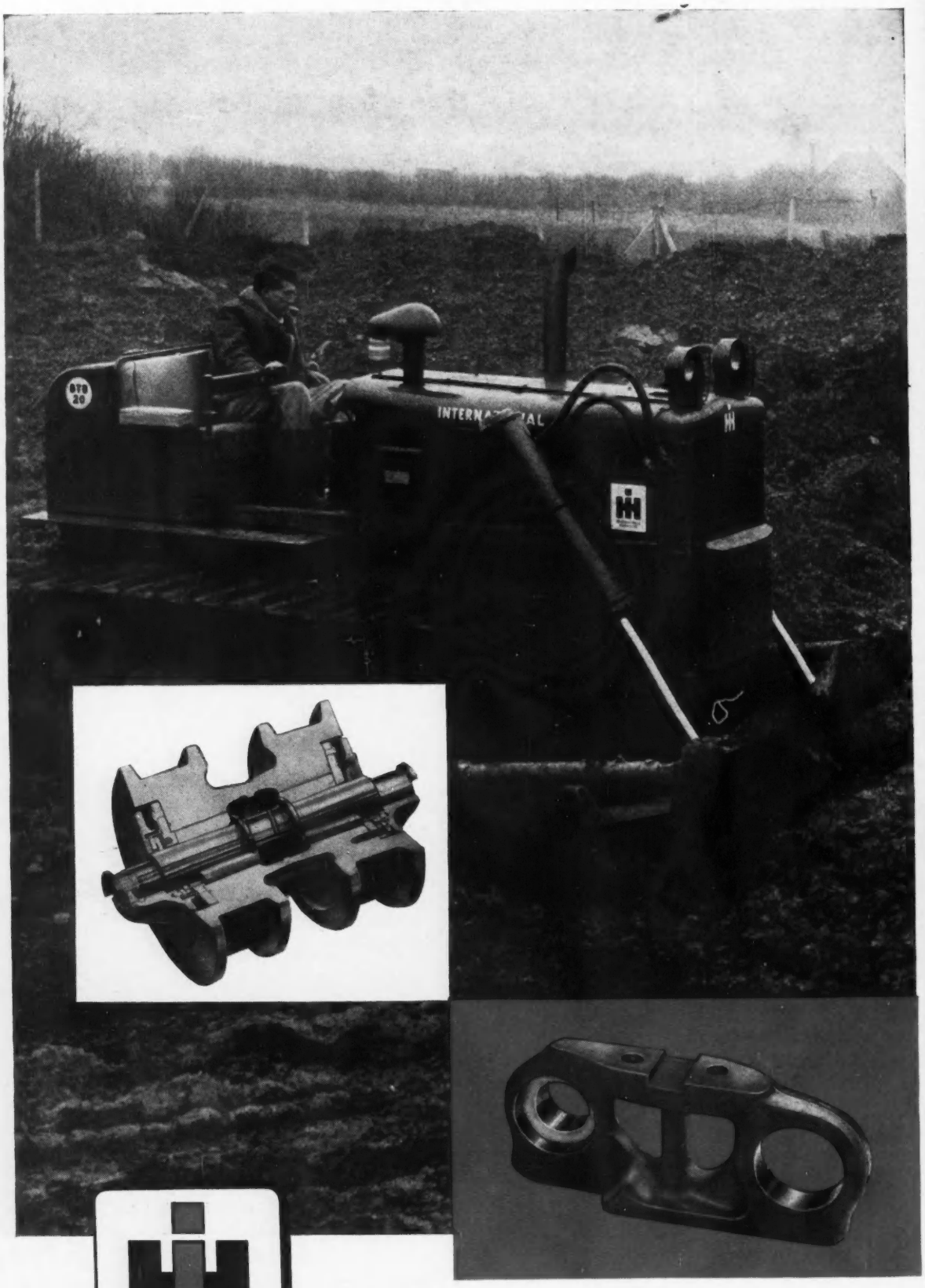

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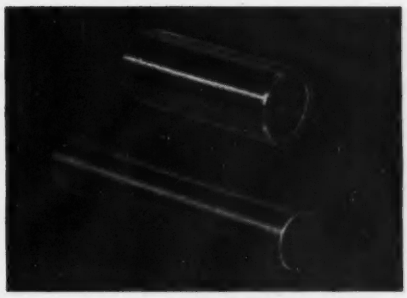

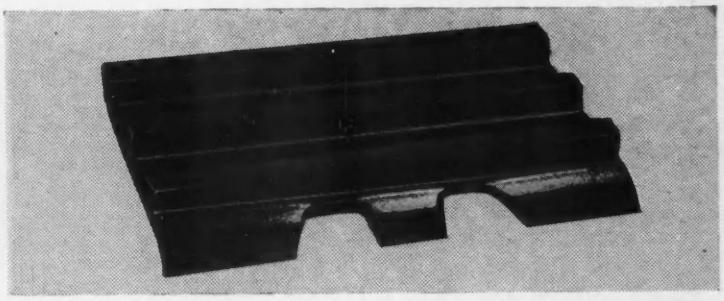

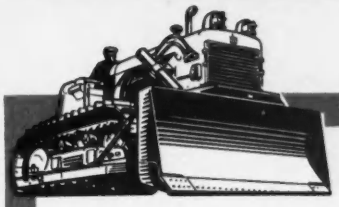

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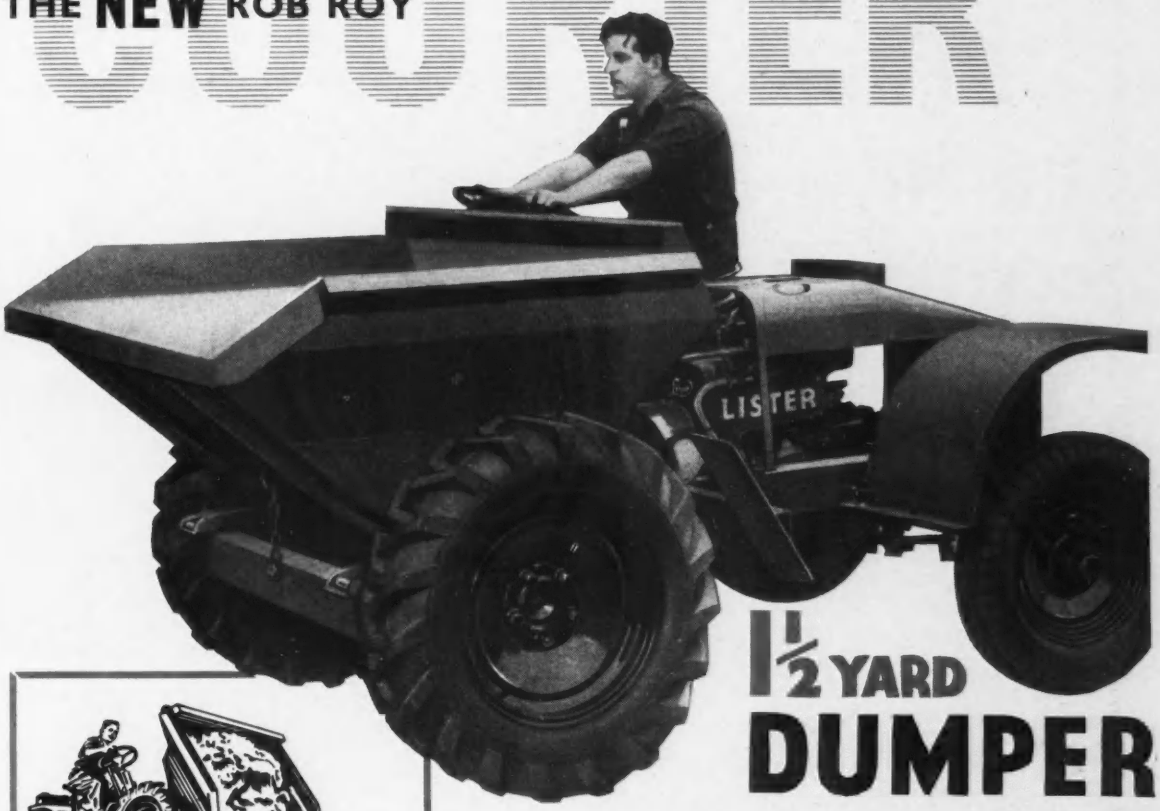

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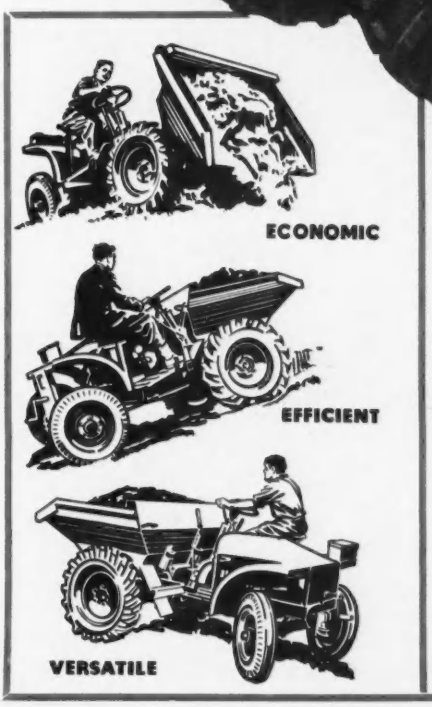

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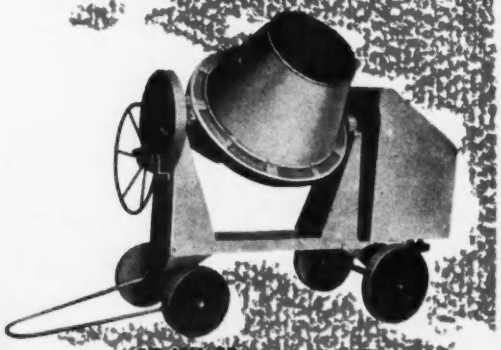

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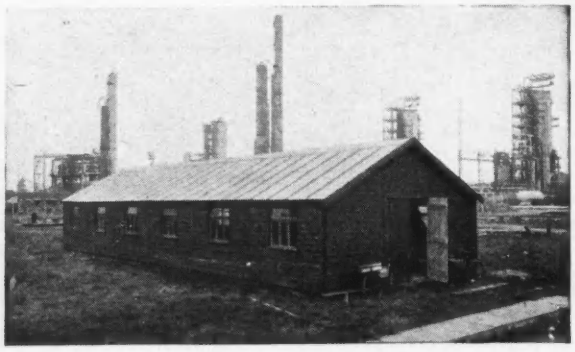

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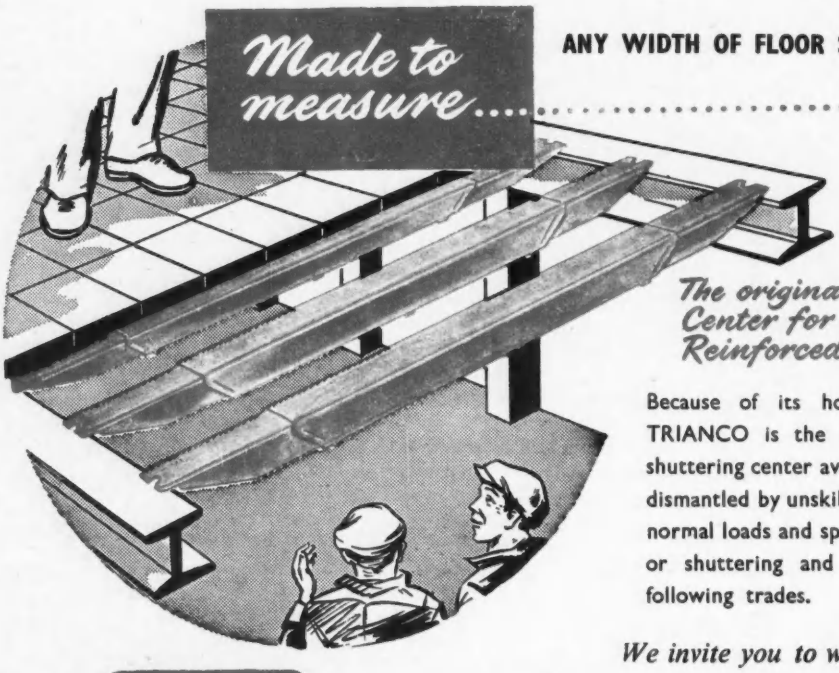

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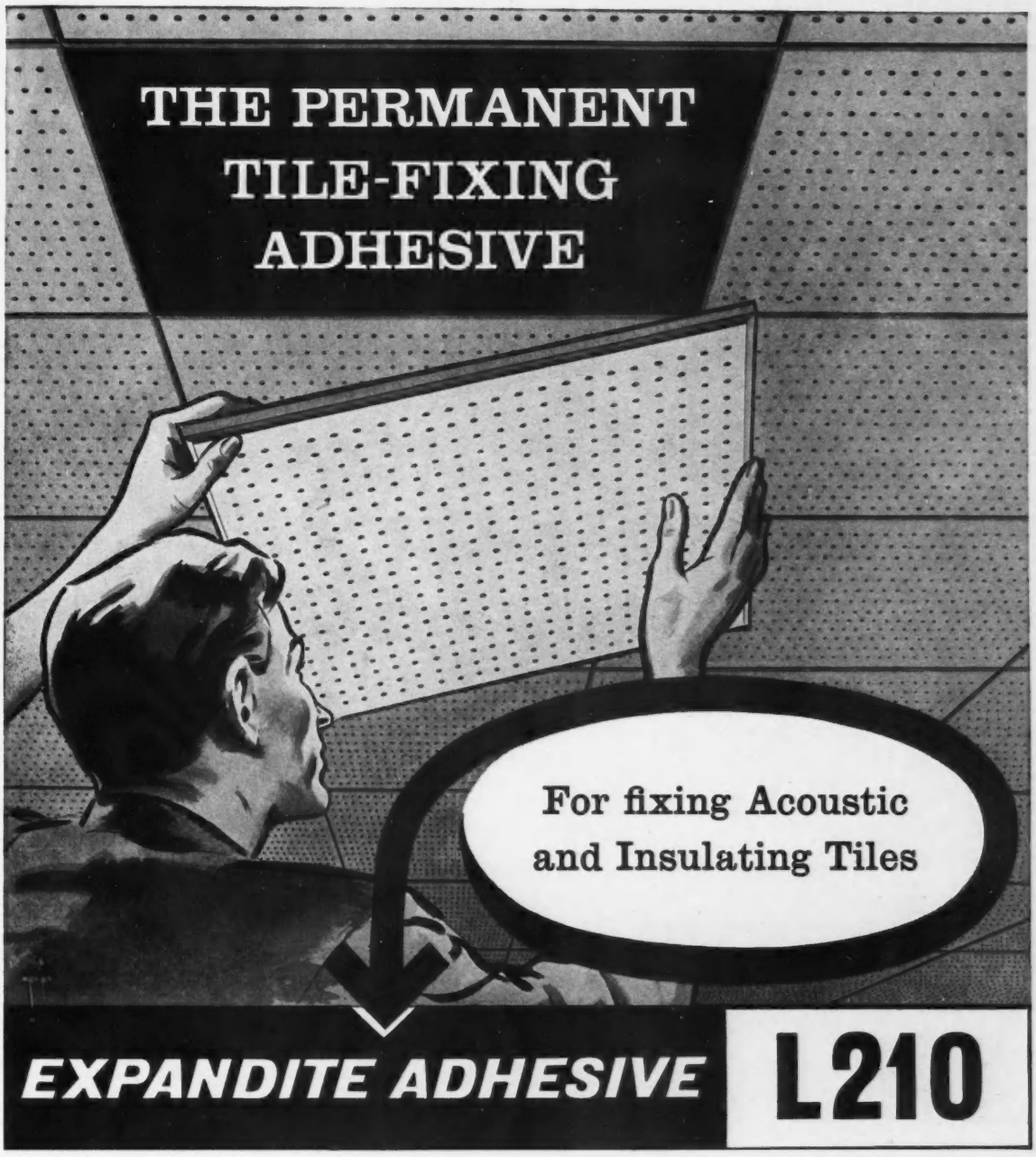

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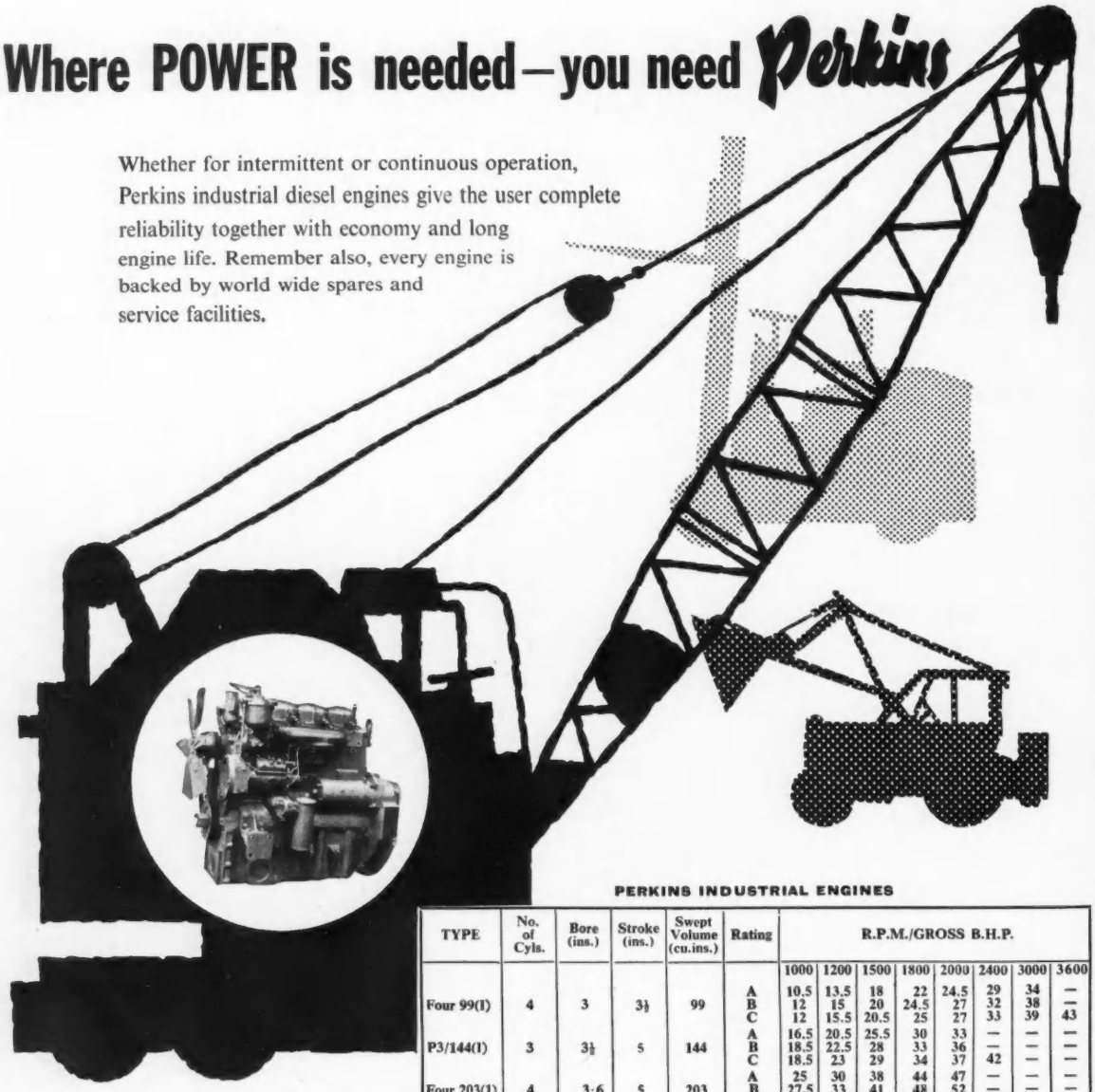

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						1000	1200	1500	1800	2000	2400	3000	3600
Four 99(I)	4	3	3½	99	A	10.5	13.5	18	22	24.5	29	34	—
					B	12	15	20	24.5	27	32	38	—
					C	12	15.5	20.5	25	27	33	39	43
P3/144(I)	3	3½	5	144	A	16.5	20.5	25.5	30	33	—	—	—
					B	18.5	22.5	28	33	36	—	—	—
					C	18.5	23	29	34	37	42	—	—
Four 203(I)	4	3·6	5	203	A	25	30	38	44	47	—	—	—
					B	27.5	33	41	48	52	—	—	—
					C	28	34	43	50	54	60	—	—
Four 270(I)	4	4¼	4¾	270	A	33	39	47	53	57	—	—	—
					B	36	43	52	58	62	—	—	—
P6(I)	6	3½	5	288	A	34	41	51	60	65	—	—	—
					B	37	45	56	66	72	—	—	—
					C	38	46	58	69	75	83	—	—
R6(I)	6	4	4½	340	A	38	46	58	67	69	—	—	—
					B	41	51	64	74	76	—	—	—
					C	44	54	68	81	89	102	—	—
S6(I)	6	4¾	5	450	A	49	62	80	96	105	—	—	—
					B	54	68	88	106	115	—	—	—
					C	56	70	90	108	119	—	—	—

REMARKS

A. Denotes continuous rating to BS 649: 1958 conditions (85°F. and 29·5 hg). For every 10° above 85°F. this rating should be reduced by 2% and for every 1000 ft. above 500 ft. altitude the rating should be reduced by 3½%.
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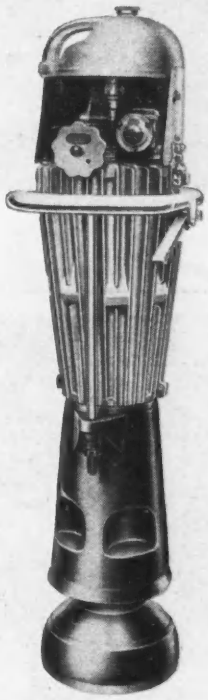
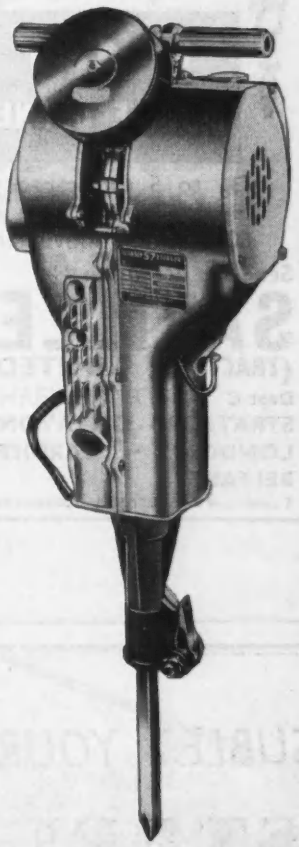


JUPITER POWER RAMMER



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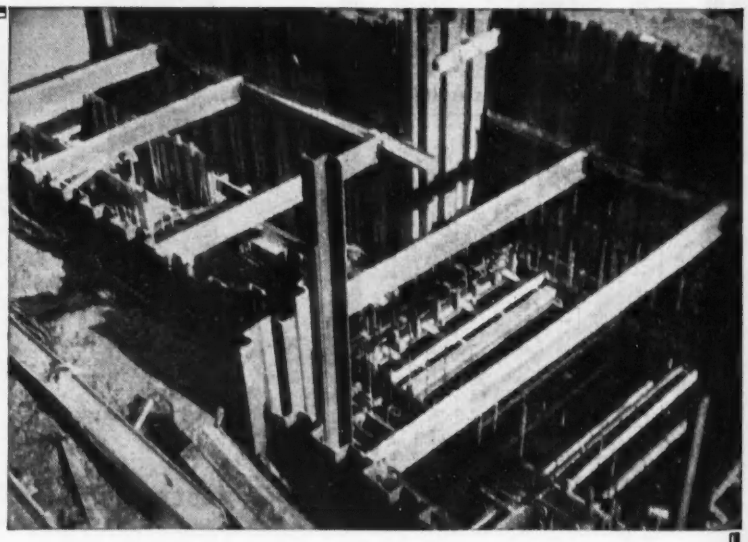

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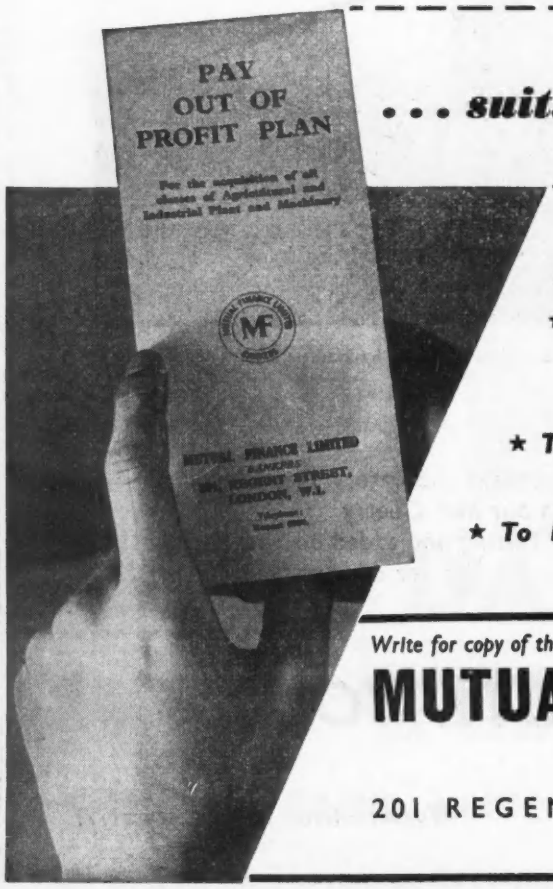

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HULLAND GRAVEL CO., LTD., Cheadle, Stoke-on-Trent. (Tel.: Cheadle 2323/4, 2119 and 2195.) Manchester Office: Hardy's Buildings, 3 Cateaton Street, Manchester, 3. (Tel.: Blackfriars 2277/8.)
PENMAENMAWR AND WELSH GRANITE CO., LTD., 7 Picton Road, Liverpool, 15. (Tel.: Sefton Park 7261.) All sizes and gradings of crushed granite aggregate from our Collingwood Dock (Liverpool) Depot. Any quantity per day; immediate delivery ex stock.
TERN HILL SAND AND GRAVEL CO., LTD., Almington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) (See Staffordshire for details.)
TRENTHAM GRAVEL CO., LTD., Lordsley Quarries, Willoughbridge, near Market Drayton, Salop. (Tel.: Pipe Gate 304/5.) All sizes crushed or natural washed gravel. Twice washed sharp concreting sand. Plastering sand. Plant capacity: 2,000 tons per day.
WILLIAMS, C. F., Bishop Street Sand Quarry, Turncroft Lane, Stockport. (Tel.: Stockport 7096.) Building and concrete sand. Bulk sand and gravel filling a speciality.

CORNWALL

PENTEWAN DOCK AND CONCRETE CO., LTD., Pentewan Works, near St. Austell. (Tel.: Mevagissey 3335/6.) Gwithian Works, near Hayle. Pure silica gravel and grit, concreting, building, plastering and asphalting sands, elvan and granite aggregates, all sizes.

CUMBERLAND

BROOMBYS, LTD., Sandside, Milnthorpe (Tel. 3251/2), Westmorland. (See Westmorland.)
ESK MANUFACTURING CO., LTD., Dalston Road, Carlisle, Cumberland. (Tel. Carlisle 2-4941.) All grades washed, crushed gravel and concreting sand to B.S. Specification. Precast concrete products and partition blocks. Sand lime coloured facing and common bricks. Ex works or delivered.

DENBIGHSHIRE

SALOP SAND AND GRAVEL SUPPLY CO., Admaston, Wellington (Tel.: 961), Salop.

DERBYSHIRE

BALLIDON QUARRIES, LTD., Ballidon, near Ashbourne, Derbyshire. (Tel.: Parwich 201 and 202.) Clean and graded dry limestone to B.S.S., all sizes, coated limestone to B.S. 802 and 1621 and wet-mix; large output; reliable deliveries.
BURROWS BROTHERS (EXCAVATIONS), LTD., Market Place Chambers, West Bars, Chesterfield. (Tel.: Chesterfield 7130.) Red shale, black ashes, graded clinker, filter media, stone slag, sand, gravel and hogging filling. Bulk quantity supplies.
GRAVEL HILL SAND QUARRIES, LTD. Tel.: Ashby (Leics.) 79. (See Leicestershire for details.)
HILTON GRAVEL, LTD., Hilton, Derby. (Tel.: Etwall 422.) Also at Mercaston. (Tel.: Brailsford 316.) And at Willington. (Tel.: Repton 3215.)
HOVERINGHAM GRAVEL CO., Hoveringham, Nottingham. (Tel.: Lowdham 3171—15 lines.) (For details, see Nottinghamshire.)
HULLAND GRAVEL CO., LTD., Cheadle, Stoke-on-Trent. (Tel.: Cheadle 2323/4, 2119 and 2195.) Manchester Office: Hardy's Buildings, 3 Cateaton Street, Manchester, 3. (Tel.: Blackfriars 2277/8.)
SALISBURY AND WOOD, LTD., Matlock (Tel. 272/273). Limestone and granite, dry or coated gravel and sand: kerbs, slabs, blocks, posts, reconstructed and natural stone; lime and ground limestone. Lightweight aggregates, ashes, red shale.

DEVONSHIRE

PLYMPTON TRADING CO., LTD., Marsh Mills, Plympton, Plymouth. (Tel.: Plympton 2361.) Washed and graded sands for all purposes. Special sands to B.S.S. Precast concrete.

DORSET

BULL BROS., S. AND L., LTD., 126A High Street, Winchester (Tel. 2264). (See Hampshire.)
DANGERFIELD, F. J. AND CO., LTD., 261A Finchley Road, London, N.W.3. (Tel.: HAMpstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)
DORSET LIMESTONES, LTD., Bumpers Lane, Easton, Portland, Dorset. (Tel.: Portland 2207/8.) Tarred and bituminous macadam, foundation materials, limestone for all purposes and to all gradings. Portland stone aggregates and Portland capstone aggregates for reconstructed stone. By road and sea.
GILSON, S. C., AND SONS, LTD., Holcombe, near Bath. (Tel.: Stratton-on-the-Fosse 243.)
HALL AND CO., LTD., 8 Commercial Road, Parkstone (Tel.: 5379).
MOREYS (VERWOOD), LTD., Verwood, Wimborne, Dorset. (Tel.: Verwood 234.) Concrete aggregates, building sand, hoggin, path gravel.

DURHAM

BRAITHWAITE, A., and CO., LTD., Knaresborough, Yorks. Quarry at Catterick. (Tel.: Old Catt. 157.) (For details see Yorkshire.)

ESSEX

ALRESFORD SAND AND BALLAST CO., LTD., Alresford Creek, near Colchester, Essex. (Tel.: Wivenhoe 341.) Pits at Alresford Creek, Brightlingsea, Stoke-by-Nayland, Bures and Holland. All grades of washed shingle, concreting sand and building sand. Road and water transport.
BAKER, F. AND E., LTD., 73 High Road, Rayleigh, Essex. (Tel.: Rayleigh 1031/2.) Pits at Great Totham, Heybridge and West Tilbury. All grades of washed material supplied and delivered; also hardcore, ashes and bricks.
BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: Norwood Hill 115.) (For dets., see Leics.)
BENT-MARSHALL (LEYTON), LTD., 665-667 High Road, Leyton, E.10. (Tel.: Leytonstone 4047/8.) Sand, ballast, brick and concrete hardcore delivered all areas.
DANGERFIELD, F. J., & CO., LTD., 261A Finchley Rd., London, N.W.3. (Tel.: HAMpstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)
FERRIS PITS, LTD., The Limes Garage, Fenceplece Road, Barkingside, Essex. (Tel.: Hainault 5271/2-3001/2.) Pits at Orsett, near Stanford-le-Hope, and Upminster. All grades of washed aggregates, plastering and building sands supplied and delivered, also hardcore and ashes.
HALL AND CO., LTD., Manor Road, Romford. (Tel.: Romford 42321.) Pits at Aveley, Boreham and Linford, near Grays. Gravel aggregates, concreting, plastering and building sand.
HUNNABLE, F. A., AND SON, LTD., Rayne Road, Braintree, Essex. (Tel.: Braintree 151 and 1351.) Graded washed stone, ¼in. to rejects; washed concreting sand and washed soft building sand. Classified sand for asphalt. Pits at Braintree, Bocking, Beasley End, Hedingham and Alphamstone.
LEIGH BUILDING SUPPLY CO., LTD., Head Office: 958 London Road, Leigh-on-Sea, Essex. (Tel.: 78264—5 lines.) All grades washed materials, building sand, hardcore, ashes, bricks, granite.
PETERS AND BARHAM, LTD., 309 South Street, Romford. (Tel.: Romford 44141—7 lines.) Washed and crushed gravel, all sizes; sand. Pits at Ashelham, Chignall St. James, Dagenham, Great Waltham, North Ockendon, Roxwell, West Thurrock.
READ, P. T., LTD., Foxlands Gravel Pit, Foxlands Crescent, Dagenham. (Tel.: Hainault 6111.) All sands, ballast and shingles supplied and delivered, also ready-mixed concrete.
READ, P. T., LTD., Fairlop Airfield, Forest Road, Ilford. (Tel.: Hainault 6111/2/3.) High-grade sands, ballast and shingles supplied and delivered; also ready-mixed concrete.
ST. IVES SAND AND GRAVEL CO., LTD., 22 The Broadway, St. Ives, Hunts. (Tel.: St. Ives 2441/2/3/4.) (See Huntingdonshire for details.)
STANWAY CONTRACTS, LTD., Upper Edwards Hall, Eastwood, Southend-on-Sea. (Tel.: Eastwood 55161.) Sand and gravel pits at Rochford and Woodham Walter. Graded aggregates supplied or delivered.
WELFORD GRAVELS, LTD., Head Office: Goldington, Bedford (Tel. 4587/8/9). Washed and graded aggregates. Local Office and pits: Tillingham 287.
WIVENHOE SAND, STONE AND GRAVEL CO., LTD., Wivenhoe, near Colchester, Essex. (Tel.: Wivenhoe 231.) High-quality washed aggregates of all grades.

GLOUCESTERSHIRE

AMEY'S AGGREGATES, LTD., Lower Wootton, Boars Hill, Oxford. (Tel.: Oxford 35421—10 lines.) Pits at Dry Sandford, near Abingdon, Sutton Courtenay, near Abingdon. (Tel.: Sutton Courtenay 275.) Theale, near Reading. (Tel.: Theale 358.) Dorchester, Oxon. (Tel.: Clifton Hampden 236.) Billing, Northampton. (Tel.: Cogenhoe 464) for washed and graded aggregates to B.S.S.
BENGRY AND SONS, LTD., Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) (See details under Herefordshire.)
COKE, T. F. (CHELTENHAM), LTD., 267 Gloucester Road, Cheltenham. (Tel.: Cheltenham 4717/4874.) Sand, graded gravel aggregates, hardcore, limestone, chippings, tarred and bituminous limestone, concrete blocks, fence posts, etc. etc.
CROMHALL QUARRIES, LTD., Cromhall, Wottonunder-Edge, Glos. (Tel.: Falfield 346/7.) Concrete aggregates, pre-graded in large quantities. Tarmacadam, tarpaving, bituminous macadam and cold asphalt to B.S.S. for hand or machine laying.
GRIFFITHS, A., AND SONS, Churchdown, Gloucester. (Tel.: Churchdown 3135 and 2216.) Pit, quarry and dredger owners. All grades and types aggregate materials.
HALL AND CO., LTD., Longmoor House, Ashton Vale Road, Bristol, 3. (Tel.: 63001.) Gravel aggregates, concreting, plastering and building sand.
POOLE (LECHLADE), LTD., Gravel Pit, Burford Road, Lechlade, Glos. (Tel.: Lechlade 219.)
TAYMAC, LTD., Wootton Bassett, Swindon. (Tel.: Wootton Bassett 391—5 lines.) (See Wiltshire.)

Rates for insertion in this GUIDE will be forwarded on application

CONTRACTORS' GUIDE TO AGGREGATES

GLOUCESTERSHIRE

WHITECLIFF QUARRIES AND BRICKWORKS, LTD., Coleford, Glos. (Tel.: Coleford 3158/9.) Tarred and bituminous limestone macadams, asphalt, concrete aggregates, dolomitic media, engineering, facing and common bricks for all purposes. Delivery road or rail.

HAMPSHIRE

AMEY'S AGGREGATES, LTD., Lower Wootton, Boars Hill, Oxford. (Tel.: Oxford 35421—10 lines.) Pits at Dry Sandford, near Abingdon, Sutton Courtenay, near Abingdon. (Tel.: Sutton Courtenay 275.) Theale, near Reading. (Tel.: Theale 358.) Dorchester, Oxon. (Tel.: Clifton Hampden 236.) Billing, Northampton (Tel.: Cogenhoe 464) for washed and graded aggregates to B.S.S.

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: Norwood Hill 115.) (For dets., see Leics.)

BULL BROS., S. AND L., LTD., 126A High Street, Winchester. (Tel.: 2264.) Concreting aggregates (reconstituted, pit-mixed, weighbatched to meet any specification); also ballast, hoggin, path gravel and sand from own pits at Fawley, Lockerley, Ringwood, Romsey, Sway and Totton.

DANGERFIELD, F. J., AND CO., LTD., 261A Finchley Road, London, N.W.3. (Tel.: HAMpstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)

GILSON, S. C., AND SONS, LTD., Holcombe, near Bath. (Tel.: Stratton-on-the-Fosse 243.)

HALL AND CO., LTD., Baltic Wharf, Marine Parade, Southampton (Tel.: Southampton 21234), and at Portsmouth. Pits at Ringwood, Highbridge and Totton. Gravel aggregate, concreting, plastering and building sand.

HASKINS, G., AND SONS, Queen Street, Emsworth. For washed sands and graded aggregates, path and road gravels, hoggin, clinker, ashes. (Tel.: Emsworth 2271.)

MOREYS (VERWOOD), LTD., Verwood, Wimborne, Dorset. (Tel.: Verwood 234.) Concrete aggregates, building sand, hoggin, path gravel.

NEW MILTON SAND AND BALLAST CO., Lymington Road, New Milton, Hants. (Tel.: 37 and 566.) Guaranteed uncrushed, washed, screened and graded concrete aggregates. All sizes. Washed sharp and fine sands.

PRIVETT, W. G., AND SONS, LTD., Drayton Lane, Portsmouth. (Tel.: Cosham 70059.) Concrete aggregates, building sand, hoggin, ashes, washed and graded filter media, etc.

WRAYSBURY SAND AND GRAVEL CO., LTD., Station Road, Theale, Reading, Berks. (Tel.: Theale 375.)

WESSEX SAND AND GRAVEL CO., 126 Hillside Ave., Southampton. (Tel.: 56616.) Pits at Romsey and Fair Oak. Concrete aggregates, hoggin, building sand, etc.

HEREFORDSHIRE

BENGRY AND SONS, LTD., Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) Suppliers of all grades of crushed concrete aggregates, road metalling, pitching stone, hardcore and coated macadam.

HARPER AND THOMAS, LTD., Bayston Hill Quarry, Shrewsbury. (See Shropshire for details.)

NASH ROCKS STONE AND LIME CO., LTD., Presteigne, Radnor. (Tel.: Presteigne 352.) All grades of tarred and bituminous macadam, roadstone, chippings and concrete aggregates, etc.

OLD RADNOR TRADING CO., LTD., Kington. (Tel. 11.) Granite and limestone aggregates, coated macadam, concrete products.

SALOP SAND AND GRAVEL SUPPLY CO., Admaston, Wellington (Tel. 961), Salop.

WHITECLIFF QUARRIES AND BRICKWORKS, LTD., Coleford, Glos. (Tel. 3158/9.) (See Gloucestershire.)

HERTFORDSHIRE

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: Norwood Hill 115.) (For dets., see Leics.)

DANGERFIELD, F. J., AND CO., LTD., 261A Finchley Road, London, N.W.3. (Tel.: HAMpstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)

EASTWOODS SALES, LTD., Eastwood House, City Road, E.C.1. (Tel.: Clerkenwell 2040.) Broxbourne pit. (Tel.: Hoddesdon 2456.) Producers and distributors of all grades of washed aggregates.

GABRIEL, C., LTD., Palmers Lane, Enfield, Middx. (Tel.: HOWard 4351/2/3.) Washed aggregates and building sand. Pits at Hertford and Enfield.

HALL AND CO., LTD., Railway Yard, Orchard Road, Stevenage (Tel.: 775), and at Hatfield. Gravel aggregates, concreting, plastering and building sand.

ST. IVES SAND AND GRAVEL CO., LTD., 22 The Broadway, St. Ives, Hunts. (Tel.: St. Ives 2441/2/3/4.) (See Huntingdonshire for details.)

WINFIELD, HENRY, LTD., Pix Farm Lane, Hemel Hempstead, Herts. (Tel.: Berkhamsted 1208/9.) Pits at: Hemel Hempstead, Watford, West Hyde, Rickmansworth. Concrete aggregates, hoggin, building sand.

HUNTINGDONSHIRE

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: Norwood Hill 115.) (For dets., see Leics.)

FERRERSAND AGGREGATES, LTD., Northampton Road Quarries, Rushden (2354/5). (See Northants.)

GRAVEL PRODUCTS (HUNTS.), LTD., St. Neots, Hunts. (Tel.: St. Neots 123.) Pits at Little Paxton, near St. Neots. (Tel.: St. Neots 308.) Deliveries in Beds., Hunts. and South Cambs.

NENE BARGE AND LIGHTER CO., LTD., Market Chambers, Peterborough (Tel. 5534/5), and Ship End Quarries, Wansford, near Peterborough (Tel.: Wansford 384/5). Roadstone, hardcore, broken stone, ballast, ashes, silica clay and sand.

ST. IVES SAND AND GRAVEL CO., LTD., 22 The Broadway, St. Ives, Hunts. (Tel.: St. Ives 2441/2/3/4.) Producers of all grades of washed sand and gravel. Ready mixed concrete. Precast concrete of every description.

WELFORD GRAVELS, LTD., Head Office: Goldington, Bedford. (Tel.: 4587/8/9.) (See Bedfordshire.)

KENT

BRASTED SAND PITS, Brasted, Kent. (Tel. 586). London office: 10A Ellery Street, S.E.15. (Tel.: New Cross 3337.) Soft and plastering sands, lime and sand-mix dry, hardcore, S.H. bricks, ashes, etc.

BROWN BROS. (SITTINGBOURNE), LTD., Chalkwell Road, Sittingbourne, Kent. (Tel.: Sittingbourne 330.) Sand, ballast, shingle, hardcore, clinker, breeze blocks, etc.

CLUBB, J., LTD., Dartford, Kent. (Tel.: Dartford 25431.) Pits in North Kent, Medway area and Sevenoaks district. All washed and crushed gravel aggregates, concreting and building sand.

KENT

DIAMOND TREAD CO. (1938), LTD., Ditton Court Quarry, Larkfield, near Maidstone. (Tel.: West Malling 3444.) Quarry owners; tarmacadam, bituminous macadam and dry road stone manufacturers and suppliers. Head Office: 21-22 Old Bailey, London, E.C.4. (Tel.: City 7001—10 lines.)

DIAMOND TREAD CO. (CHART), LTD., Swan Lane Quarries, Little Chart, Ashford, Kent. Quarry owners; tarmacadam, bituminous macadam and dry roadstone suppliers. All inquiries to Area Office: Ditton Court Quarry, Larkfield, near Maidstone, Kent. (Tel.: W. Malling 3444.)

HALL AND CO., LTD., Canning Street, Maidstone. (Tel.: Maidstone 51051); and at Folkestone and Hayes. Pits at Lunsford, near Larkfield. Gravel aggregates, concreting, plastering and building sand, Surecrete precision-mixed concrete.

HARRIS, M. P., AND CO., LTD., Station Road, Paddock Wood, Kent (Tel. 385). (See Sussex.)

TILBURY CONTRACTING AND DREDGING CO., LTD., Postley, Maidstone. (Tel.: Maidstone 55401/2/3.) Suppliers of tarred, bituminous and dry Kentish ragstone, sea walling, asphalt fillers, Scotch granite and kerbing.

LANCASHIRE

BROOMBYS, LTD., Sandside, Milnthorpe (Tel. 3251/2), Westmorland. (See Westmorland.)

BUCKTON QUARRY. Broken stone, all grades. (Tel.: Mossley 123.) Or write Main Road, Oldham.

CASTLETON SAND AND GRAVEL QUARRIES, LTD., Trows Lane, Castleton, nr. Rochdale. (Tel.: Castleton 57100.) Lee Quarries, Bacup. (Tel.: Bacup 287.) Washed pit sand, crushed washed stone aggregates; pitching stone.

CROFT GRANITE BRICK AND CONCRETE CO., LTD., West Bank, Widnes (Tel. 2656). "Kubitized" granite aggregate to B.S.S., tarred and bituminous macadam, cold asphalt, "Croftmatite" Wet Mix, filter media, concrete products.

CROXDEN GRAVEL, LTD., Cheadle, Stoke-on-Trent, Staffs. (Tel.: Tean 393.) Manchester Office: Blackfriars 3766/7. Plant capacity, 2,000 tons per day.

DUNNING AND SON, LTD. (See Shropshire.)

HARTLEY, JOHN W., LTD., Lundsfield Quarry, Carnforth, Lancs. (Tel.: Carnforth 100.) Large producers of highest quality washed sands, clean washed natural pebble and crushed gravel aggregates for all construction purposes.

HILTON GRAVEL, LTD., Rice Street, Liverpool Road, Manchester, 3. (Tel.: Deansgate 5455 and 5456.) Quarries at Cheadle, Staffs. (Tel.: Tean 241.) And at Longton, Stoke-on-Trent. (Tel.: Longton 32196.)

HULLAND GRAVEL CO., LTD., Cheadle, Stoke-on-Trent. (Tel.: Cheadle 2323/4, 2119 and 2195.) Manchester Office: Hardy's Buildings, 3 Cateaton Street, Manchester, 3. (Tel.: Blackfriars 2277/8.)

PENMAENMAWR AND WELSH GRANITE CO., LTD., all sizes and gradings of crushed granite aggregate. Immediate delivery ex stock.
Liverpool and Preston Depots:
Office: 7 Picton Road, Liverpool, 15. (Tel.: Sefton Park 7261.)
Manchester Depot:
Office: Cornbrook Road, Manchester, 15. (Tel.: Trafford Park 3830.)

ROUND-O QUARRIES, LTD., Helsby Street, Warrington (Tel. 35451—4 lines). Building and concrete sand and shale.

TERN HILL SAND AND GRAVEL CO., LTD., Almington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) (See Staffs. for details.)

TRENTHAM GRAVEL CO., LTD., Lodsley Quarries, Willoughbridge, near Market Drayton, Salop. (Tel.: Pipe Gate 304/5.) All sizes crushed or natural washed gravel. Twice-washed sharp concreting sand. Plastering sand. Plant capacity: 2,000 tons per day.

WELFORD GRAVELS, LTD., Head Office: Goldington, Bedford (Tel. 4587/8/9). Local Office and pits: Chorley 3923.

WITHERS LIMESTONE, LTD., Black Lane Quarry, Carnforth. (Tel.: Carnforth 327.) Graded limestone aggregate to B.S.S., all sizes. Immediate delivery ex stock.

X.L. GRANITE (INGLETON), LTD., Head Offices: Clapham, via Lancaster. (Tel.: Clapham 318/9.) Works Tel.: Ingleton 231. All sizes and gradings of Ingleton granite aggregate.

LEICESTERSHIRE

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London Office—Norwood Hill 115.) Best Leicestershire grey granite, dry and coated gradings to any specification, cold asphalt and met mix. Prompt rail/road delivery.

BRUNTINGTHORPE GRAVELS, LTD., Gilmorton, near Rugby. (Tel.: Lutterworth 46.) All sizes gravel aggregate, building and concrete sand to B.S.S., scientifically balanced ballast.

CLIFFE HILL GRANITE CO., LTD., Markfield, near Leicester. (Tel.: Markfield 561/2/3.) Granite aggregates to B.S.S. All sizes. Tarred and bituminous granite, concrete slabs and kerbs. Transit-mixed concrete.

CROFT GRANITE, BRICK AND CONCRETE CO., LTD., Croft, near Leicester. (Tel.: Narborough 2261—4 lines.) "Kubitized" granite aggregate to B.S.S., tarred and bituminous macadam, cold asphalt, "Croftmatite" Wet Mix, filter media, concrete products.

DUSTON STONE QUARRIES, LTD., New Duston, Northampton. (Tel.: Brixworth 278 and 298; Duston 505.) (See Northamptonshire.)

ENDERBY AND STONEY STANTON GRANITE CO., LTD., 21 New Walk, Leicester (Tel. 56682). Quarries at Enderby. London Offices: 29 Dorset Square, N.W.1. (Tel.: Amb. 1141.)

GRAVEL HILL SAND QUARRIES, LTD., Prior Park, Ashby-de-la-Zouch. (Tel.: Ashby 79.) Works: Hartshorne, Derbys. Yellow screened plastering and building sand, all to B.S.S.

HILTON GRAVEL, LTD., Hemington Fields, near Shardlow, Derby. (Tel.: Shardlow 266.)

HOVERINGHAM GRAVEL CO., Hoveringham, Nottingham. (Tel.: Lowdham 3171—15 lines.) (For details, see Nottinghamshire.)

MOUNTSORREL GRANITE CO., LTD., 21 New Walk, Leicester (Tel. 56682). Quarries at Mountsorrel, near Loughborough. ¼in. pink granite a speciality. London Office: 29 Dorset Sq., N.W.1. (Amb. 1141.)

WANLIP GRAVELS, LTD., Wanlip Road, Syston, Leicester. Any size or grading, scientifically balanced ballast. All to B.S.S. (Tel.: Syston 2327 and 2797.)

LEICESTERSHIRE

WELFORD GRAVELS, LTD., Head Office: Goldington, Bedford (Tel. 4587/8/9). (See Northamptonshire.)

WREAKE VALLEY GRAVELS CO., LTD., Melton Mowbray. (Tel.: Pits—Rotherby 205 or head office Melton 2488.) All grades washed aggregates and sand.

LINCOLNSHIRE

BLADES AND WAITE, Waddington, near Lincoln. (Tel.: Waddington 365.) For sale any quantity of ash, stone, sand and gravel.

BULLIMORES SAND AND GRAVEL, LTD., South Witham, Grantham. (Tel.: Thistleton 223.) Building sand, hardcore, ashes. All grades washed sand and aggregates.

BURROWS BROTHERS (EXCAVATIONS), LTD., Market Place Chambers, West Bars, Chesterfield (Tel. 7130). (For details, see Derbyshire.)

CONINGSBY SUPPLY CO., LTD., Registered Office: The Broadway, Woodhall Spa, Lincs. (Tel.: Woodhall Spa 3150.) Screened limestone, hardcore, pitching, filling, flint, hoggin. Ex quarries or delivered.

DOW-MAC (PRODUCTS), LTD., Tallington, Stamford. All grades of washed sand and gravel. (Tel.: Market Deeping 2301.)

EAST MIDLANDS BUILDERS' SUPPLY CO., 21 Castledyke West, Barton-on-Humber, Lincs. (Tel.: Barton 2189.) All grades washed sand and gravel, roadstone, hardcore, washed silica sand.

GIBBONS, F. B., AND SONS, LTD., Registered Office: Welby House, Market Deeping, near Peterborough. (Tel.: Market Deeping 3321/2383.) Pits at Langtoft, near Peterborough. (Tel.: Market Deeping 2210.) All grades washed sand and aggregates.

HARTSHOLME GRAVEL AND SAND CO., LTD., Hartsholme Wood, Doddington Road, Lincoln. Sole selling agents: Hartsholme Sales, Ltd., 17 West Parade, Lincoln. (Tel.: Lincoln 23391.)

HOVERINGHAM GRAVEL CO., Hoveringham, Nottingham. (Tel.: Lowdham 3171—15 lines.) (For details, see Nottinghamshire.)

PETERBOROUGH QUARRIES, LTD., Sandylands, Maxey, Peterborough. (Tel.: Market Deeping 2355—3 lines.) Quarry at Ropsley, all grades of hardcore and broken stone. (See also Northants.)

POLLARD, C., AND SON (TALLINGTON), LTD., Walk House, Langtoft, Peterborough. Pits at Tallington, near Stamford, Lincs. (Tel.: Market Deeping 2140.) All grades washed sand and aggregates. For "Supercrete" ready mixed concrete, 'phone Market Deeping 3132.

TRENTFORD GRAVELS, LTD., Head Office: Deansgrove Grimsby. (Tel.: Grimsby 5354.) Washed and graded gravel and sand, roadstone, hardcore, slag, tarmac, ashes, etc. Pits and quarries throughout the county.

LONDON

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: Norwood Hill 115.) (For dets., see Leics.)

COX, H., AND SONS, LTD.,
33 Southampton Way,
Camberwell, S.E.5.
(Tel.: Rodney 2215—3 lines.)

CROFT GRANITE BRICK AND CONCRETE CO., LTD., 128-136 High Street, Edgware, Middlesex. (Tel.: Edgware 0076/7 and 1246.) "Kubitized" granite aggregate to B.S.S., tarred and bituminous macadam, cold asphalt, "Croftmatite" Wet Mix, filter media, concrete products.

DANGERFIELD, F. J., AND CO., LTD., 261A Finchley Road, N.W.3. (Tel.: HAMpstead 8044-8.)Granite limestone or slag, coated or dry, all sizes and pitching, granite kerb and setts, felspar quartz and other minerals by road or rail, or ex London stock.

DORSET LIMESTONES, LTD., Bumpers Lane, Easton, Portland, Dorset. (Tel.: Portland 2207/8.) (For details, see Dorset.)

DRINKWATER, W. W. (WILLESDEN), LTD., Dudden Hill Lane, Willesden, N.W.10. (Tel.: GLAdstone 6400/5.) Pits: Rush Green, Denham, Bucks. (Tel.: Denham 2241/2/3.). Also Staines Road, Hounslow Heath, Middlesex. (Tel.: Hounslow 6222/3.)

GABRIEL, C., LTD., Palmers Lane, Enfield, Middx. (Tel.: HOWard 4351/2/3.) Washed aggregates and building sand. Pits at Enfield and Hertford.

HALL AND CO., LTD., Chantrey House, Eccleston Street, S.W.1 (Tel.: Sloane 7122), and at East Dulwich, Poplar and Wandsworth. Gravel aggregates, concreting, plastering and building sand.

KEEN, W. J., AND SONS, 18 Granville Road, Epping, Essex. (Tel.: Epping 2520.) All sands, ballasts, shingle and hardcore supplied.

LONDON BALLAST CO., LTD. (Tel.: Paddington 5064.) 55A Porchester Terrace North, Paddington, W.2.

READ, P. T., LTD., Gales Gardens, Bethnal Green, E.2. (Tel.: Shoreditch 9128/9.) All sands, ballast and shingles supplied and delivered; also ready mixed concrete. Pits: Fairlop Airfield, Forest Road, Ilford, Essex. (Tel.: Hainault 6111/2/3.)

ROADS RECONSTRUCTION (1934), LTD., Stockley Lane, West Drayton, Middlesex. (Tel.: West Drayton 3041.) All sizes broken limestone, dry and coated to British Standards.

MERIONETHSHIRE

SALOP SAND AND GRAVEL SUPPLY CO., Admaston, Wellington (Tel. 961), Salop.

MIDDLESEX

CROSS, GEO. C., AND CO., LTD., Ironbridge, Uxbridge Road, Southall. (Tel.: Southall 2264/5/6.) Sand, ballast, shingle, hardcore, ashes, etc.

DRINKWATER, W. W. (WILLESDEN), LTD., Staines Rd., Hounslow Hth., Middx. (Hounslow 6222/3.)

GABRIEL, C., LTD., Palmers Lane, Enfield, Middx. (Tel.: HOWard 4351/2/3.) Washed aggregates and building sand. Pits at Enfield and Hertford.

GRUNDON, S., 79 Harlington Road, Hillingdon, Middlesex. (Tel.: Uxbridge 4156.) Sand, ballast, shingle, hardcore, ashes, excavation and demolition.

HALL AND CO., LTD., Chantrey House, Eccleston Street, S.W.1 (Tel.: Sloane 7122), and at Ashford and Brentford. Pit at Bedfont, near Feltham. Gravel aggregates, concreting, plastering and building sand.

LONDON BALLAST CO., LTD. (Tel.: Paddington 5064). 55A Porchester Terrace North, Paddington, W.2.

STUART MACEY, LTD., Gordon Road, High Wycombe. (Tel.: High Wycombe 2591/2.)

THAMES SAND AND GRAVEL CO., LTD., Fordbridge Road, Shepperton. (Tel.: Walton-on-Thames 23616.) Gravel aggregates, concreting, plastering and building sand.

WRAYSBURY SAND AND GRAVEL CO., LTD. Pits at Wraysbury. (Tel.: Wraysbury 164.) Gravel aggregates, concreting, plastering and building sand.

CONTRACTORS' GUIDE TO AGGREGATES

MID-WALES

BENGRY AND SONS, LTD., Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) (See details under Herefordshire.)
HARPER AND THOMAS, LTD., Bayston Hill Quarry, Shrewsbury. (See Shropshire for details.)
NASH ROCKS STONE AND LIME CO., LTD., Presteigne, Radnor. (Tel.: Presteigne 352.) (See Herefordshire for details.)
OLD RADNOR TRADING CO., LTD. Quarries in Radnorshire. (Tel.: Kington 11.) (See Herefordshire.)
SALOP SAND AND GRAVEL SUPPLY CO., Admaston, Wellington (Tel. 961), Salop.
TERN HILL SAND AND GRAVEL CO., LTD., Almington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) (See Staffs. for details.)

MONMOUTHSHIRE

IN-SITU CONCRETE, LTD., Victoria Works, Ebbw Vale (Tel. 3032), and Phoenix Works, Cardiff (Cardiff 63311), for limestone and slag aggregates, ready-mixed concrete, tarmacadam, media, filling, etc., kerbs and pavings.
MONMOUTHSHIRE ASSOCIATED QUARRIES, LTD., Head Office: 38 Chepstow Road, Newport, Mon. (Tel.: Newport 58311/2.) Suppliers of all grades of concrete aggregates, road metalling, pitching stone, tarmacadam and bituminous macadam in limestone, dolomite and blue pennant stone. Quarries throughout the county.
WHITECLIFF QUARRIES AND BRICKWORKS, LTD., Coleford, Glos. (Tel. 3158/9). (See Gloucestershire.)

MONTGOMERYSHIRE

HARPER AND THOMAS, LTD., Bayston Hill Quarry, Shrewsbury. (See Shropshire for details.)
NASH ROCKS STONE AND LIME CO., LTD., Presteigne, Radnor. (Tel.: Presteigne 352.) (See Herefordshire for details.)
SALOP SAND AND GRAVEL SUPPLY CO., Admaston, Wellington (Tel. 961), Salop.

NORFOLK

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: Norwood Hill 115.) (For dets., see Leics.)
FRECKENHAM GRAVEL CO., LTD., The Brook, Sutton, Ely, Cambs. (Tel.: Sutton 391/3.) Washed sand and gravel. Pit: Feltwell.
JOHNSON, P. C. H., LTD., Station Road, Terrington St. Clement, near King's Lynn. (Tel.: Terrington St. Clement 248.) Washed and screened gravel, roadstone, washed sharp and fine sands.
SNETTERTON STONE QUARRIES, LTD., Pix Farm Lane, Hemel Hempstead, Herts. (Tel.: Berkhamsted 1208/9.) Pits at Snetterton. Concrete aggregates, building sand.
THORPE GRAVEL PITS, LTD., Harvey Lane, Norwich. (Tel.: Norwich 332434.) Washed and graded aggregates, stone and gravel delivered to all parts of Norfolk and Suffolk.

NORTHAMPTONSHIRE

AMEY'S AGGREGATES, LTD., Lower Wootton, Boars Hill, Oxford. (Tel.: Oxford 35421—10 lines.) Pits at Dry Sandford, near Abingdon, Sutton Courtenay, near Abingdon. (Tel.: Sutton Courtenay 275.) Theale, near Reading. (Tel.: Theale 358.) Dorchester, Oxon. (Tel.: Clifton Hampden 236.) Billing, Northampton (Tel.: Cogenhoe 464) for washed and graded aggregates to B.S.S.
BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: Norwood Hill 115.) (For dets., see Leics.)
BICESTER STONE CO., LTD., Stratton Audley, Bicester, Oxon. (Tel.: Stratton Audley 238.) Manufacturers and suppliers of all grades limestone tarmacadam, dry, pitching stone, hardcore, etc.
BILLING GRAVEL CO., LTD., Station Road, Billing, Northampton. (Tel.: Cogenhoe 219.) London Office: 23 Berkeley Square, W.1. (Tel.: Mayfair 6341.)
BRAYBROOK, E. W., LTD., Newton Road, Higham Ferrers, Northants. (Tel.: Rushden 3344 and 3345.) All grades of washed and graded aggregates to B.S.S., building sand, hardcore.
DOW-MAC (PRODUCTS), LTD., Tallington, Stamford. All grades of washed sand and gravel. (Tel.: Market Deeping 2301.)
DUSTON STONE QUARRIES, LTD., New Duston, Northampton. (Tel.: Brixworth 278 and 298: Duston 505.) Producers of building and walling stone roadstone, hardcore, broken stone, ashes, sand, gravel and hoggin. Immediate delivery throughout Northamptonshire.
FERRERSAND AGGREGATES, LTD., Northampton Road Quarries, Rushden, Northants. (Tel.: Rushden 2354/5.) Largest producers in the county of all grades of high-quality concrete aggregate to B.S.S. Deliveries throughout Northamptonshire and adjoining counties.
GIBBONS, F. B., AND SONS, LTD., Welby House, Market Deeping, Peterborough. (Tel.: Market Deeping 3321/2383.) (See Lincolnshire for details.)
HOVERINGHAM GRAVEL CO., Hoveringham, Nottingham. (Tel.: Lowdham 3171—15 lines.) (For details, see Nottinghamshire.)
KETTON STONE CO. (Prop. Andrew's Garage), Ketton, near Stamford. (Tel.: Ketton 206.) Hardcore, roadstone, crushed stone, top soil, silica clay. Quarries at Ketton.
MACKANESS, A. J., LTD., Ransome Road, Northampton. (Tel.: Northampton 589.) Producers of all grades of washed aggregates. Building sand. Mixmortar (lime/sand mortar). Prompt deliveries.
NENE BARGE AND LIGHTER CO., LTD., Market Chambers, Peterborough (Tel. 5534/5), and Ship End Quarries, Wansford, near Peterbocough (Tel.: Wansford 384/5). Roadstone, hardcore, broken stone, ballast, ashes, silica clay and sand.
NEWARK (PETERBOROUGH) SAND AND GRAVEL CO., LTD., 127 Eastfield Road, Peterborough. (Tel.: Peterborough 2091.) All grades washed and screened gravel and sand.
PETERBOROUGH QUARRIES, LTD., Sandylands, Maxey, Peterborough. (Tel.: Market Deeping 2355—3 lines.) Eight quarries supplying all grades of hardcore and broken stone. Also Wetmix at Yarwell, Wansford. All grades gravel and sand at Maxey.
POLLARD, C., AND SON (TALLINGTON), LTD., Walk House, Langtoft, Peterborough. (Tel.: Market Deeping 2140.) (See Lincolnshire for details.)
WELFORD GRAVELS, LTD., Head Office: Goldington, Bedford. (Tel.: 4587/8/9.) Largest producers of all grades of washed aggregates in Northamptonshire and Bedfordshire. Regular deliveries anywhere. Local office and pits: Fortly Ford. (Tel.: Welford 256.)

NORTH WALES

CAWOOD, WHARTON AND CO., LTD., Pistyll Gwyn Quarry, Llanarmon, near Mold. (Tel.: Llanarmon-yn-Ial 27.) Crushed limestone and tarred macadam, all grades.
CHESHIRE AND NORTH WALES TARRED MACADAM CO., LTD., Llanarmon, near Mold. (Tel.: Llanarmon-yn-Yale 43.) Hard, broken limestone; dry and coated to B.S.S. Inquiries to Registered Office—Market Chambers, Tower Square, Tunstall, Stoke-on-Trent. (Tel.: Stoke-on-Trent 88094.)
ENSTON BROS., Llwyn Isaf Quarry, Clynnog Fawr, Caernarvon. (Tel.: Clynnon Fawr 297/8.) All sizes crushed, washed natural sand and gravel. Highest quality. Precast concrete products, ex our Griffiths Crossing Factory, Caernarvon. (Tel.: Caernarvon 2535/6.) Crushed granite ex our quarry, Pengwern and Gwydyr Quarries, Ltd., Trefriw, Llanrwst, Denbighshire. (Tel.: Llanrwst 38.)
PENMAENMAWR AND WELSH GRANITE CO., LTD. Quarries at Penmaenmawr (Tel. 2256/8), and at Trevor (Tel.: Clynnogfawr 223), Caernarvonshire. All sizes and gradings of crushed granite aggregate. Any quantity per day; immediate delivery ex stock. Coated granite also available.
RUTHIN AND DENBIGH TARMACADAM CO., LTD., Denbigh. (Tel.: Denbigh 75.) Lime, limestone, carbonate of lime, tarmacadam, etc. Also inquiries to Lunt Bros., Ltd., 23 Colmore Row, Birmingham. (Tel.: Central 7408—4 lines), and Lunt Bros., Ltd., Stourbridge (Tel. 5201—6 lines).
TERN HILL SAND AND GRAVEL CO., LTD., Almington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) (See Staffs. for details.)

NOTTINGHAMSHIRE

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: Norwood Hill 115.) (For dets., see Leics.)
BURROWS BROTHERS (EXCAVATIONS), LTD., Market Place Chambers, West Bars, Chesterfield. (Tel. 7130.) (For details, see Derbyshire.)
GLEN QUARRIES, LTD., Central Chambers, Wellgate, Rotherham. (Tel.: Rotherham 5223.) Crushed and graded stone, concreting sand, building sand, plastering sand and crushed gravel; could be collected ex quarry or delivered.
GUNTHORPE GRAVELS (1958), LTD. (Tel.: Nottingham 77357; and Works: Lowdham 2131.) (An associate company of T. C. Campbell, Ltd.) All grades washed gravel and sand to B.S.S.
HOVERINGHAM GRAVEL CO., Hoveringham, Nottingham. (Tel.: Lowdham 3171—15 lines.) Quarries at Hoveringham, Holme, Pierrepont Colwick, Bleasby and Newark. All grades of washed gravel and sand to any specification. Crushed quartzite for surface dressing of roads a speciality. Plant capacity 8,000 tons per day.
NEWARK GRAVEL AND CONCRETE CO., LTD., Grove Street, New Balderton, Newark, Notts. (Tel.: Newark 401.) All grades washed sand and aggregates.
SALISBURY AND WOOD, LTD., Matlock. (Tel.: 272/273.) (For details, see Derbyshire.)

OXFORDSHIRE

AMEY'S AGGREGATES, LTD., Lower Wootton, Boars Hill, Oxford. (Tel.: Oxford 35421—10 lines.) Pits at Dry Sandford, near Abingdon, Sutton Courtenay, near Abingdon. (Tel.: Sutton Courtenay 275.) Theale, near Reading. (Tel.: Theale 358.) Dorchester, Oxon. (Tel.: Clifton Hampden 236.) Billing, Northampton (Tel. Cogenhoe 464) for washed and graded aggregates to B.S.S.
BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: Norwood Hill 115.) (For dets., see Leics.)
BENGRY AND SONS, LTD., Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) (See details under Herefordshire.)
BICESTER STONE CO., LTD., Stratton Audley, Bicester, Oxon. (Tel.: Stratton Audley 238.) Manufacturers and suppliers of all grades limestone, tarmacadam, dry, pitching stone, hardcore, etc.
CURTIS, J., AND SONS, LTD., Botley Works, Oxford. (Tel.: Oxford 41081/2/3.) Sand and all grades of washed aggregates. Pits at Radley, near Abingdon. (Tel.: Abingdon 441.)
DANGERFIELD, F. J., AND CO., LTD., 261A Finchley Road, London, N.W.3. (Tel.: HAMpstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)
DIX, G. H., AND SON, LTD., Freeland, Oxon. (Tel.: Freeland 234.)
DUSTON STONE QUARRIES, LTD., New Duston, Northampton. (Tel.: Brixworth 278 and 298: Duston 505.) (See Northamptonshire.)
GRUNDON, S., (EWELME), LTD., Ewelme, Oxon. (Tel.: Ewelme 20.) London Office (Tel.: Uxbridge 4156.) All grades washed aggregates. Path hoggin, broken stone, building sand.
HAINES, H., (WITNEY), LTD., Oxford Road, Witney. (Tel.: Witney 42.) All grades washed aggregates, hardcore, pitching and broken stone, Cotswold building and walling stone.
SNETTERTON STONE QUARRIES, LTD., Pix Farm Lane, Hemel Hempstead, Herts. (Tel.: Berkhamsted 1208/9.) Roadstone, Cotswold building and walling stone.
WRAYSBURY SAND AND GRAVEL CO., LTD., Station Road, Theale, Reading, Berks. (Tel.: Theale 373.)

RADNORSHIRE

BENGRY AND SONS, LTD., Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) (See details under Herefordshire.)
NASH ROCKS STONE AND LIME CO., LTD., Presteigne, Radnor. (Tel.: Presteigne 352.) (See Herefordshire for details.)
OLD RADNOR TRADING CO., LTD. Quarries in Radnorshire. (Tel.: Kington 11.) (See Herefordshire.)
SALOP SAND AND GRAVEL SUPPLY CO., Admaston, Wellington (Tel. 961), Salop.

RUTLAND

BULLIMORES SAND AND GRAVEL, LTD., South Witham, Grantham, Lincs. (Tel.: Thistleton 223.) Building sand, hardcore, ashes. All grades wsshed sand and aggregates.
GIBBONS, F. B., AND SONS, LTD., Welby House, Market Deeping, Peterborough. (Tel.: Market Deeping 3321/2383.) (See Lincolnshire for details.)
HOVERINGHAM GRAVEL CO., Hoveringham, Nottingham. (Tel.: Lowdham 3171—15 lines.) (For details, see Nottinghamshire.)

RUTLAND

KETTON STONE CO. (Prop.: Andrew's Garage), Ketton, near Stamford. (Tel.: Ketton 206.) Hardcore, roadstone, crushed stone, top soil, silica clay. Quarries at Ketton.
PETERBOROUGH QUARRIES, LTD., Sandylands, Maxey, Peterborough. (Tel.: Market Deeping 2355—3 lines.) Quarry at Greetham, all grades of broken stone and hardcore. (See also Northamptonshire.)
POLLARD, C., AND SON (TALLINGTON), LTD., Walk House, Langtoft, Peterborough. (Tel.: Market Deeping 2140.) (See Lincolnshire for details.)

SCOTLAND

KEIR AND CAWDER, LTD., Kirkintilloch Road, Bishopbriggs. (Tel.: Bishopbriggs 3200.) All grades washed sand and gravel aggregates.

SHROPSHIRE

BALLIDON QUARRIES, LTD., Ballidon, near Ashbourne, Derbyshire. (Tel.: Parwich 201 and 202.) Clean and graded dry limestone to B.S.S., all sizes, coated limestone to B.S. 802 and 1621 and wet-mix; large output; reliable deliveries.
BENGRY AND SONS, LTD., Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) (See details under Herefordshire.)
DUNNING AND SON, LTD., Haughmond Quarry, near Shrewsbury. (Tel.: Upton Magna 286/7.) All grades of high-quality roadstone, concrete aggregates and coated macadam. All to B.S.S. Any tonnage available for immediate delivery.
HARPER AND THOMAS, LTD., Bayston Hill Quarry, Shrewsbury. (Tel.: Bayston Hill 351.) High quality roadstone, chippings, concrete aggregates, hardcore and coated macadam. Large tonnages always avail.
NASH ROCKS STONE AND LIME CO., LTD., Presteigne, Radnor. (Tel.: Presteigne 352.) (See Herefordshire for details.)
OLD RADNOR TRADING CO., LTD., Kington. (Tel 11.) (See Herefordshire.)
SALOP SAND AND GRAVEL SUPPLY CO., Admaston, Wellington (Tel. 961), Salop.
TERN HILL SAND AND GRAVEL CO., LTD., Almington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) (See Staffordshire for dets.)
TRENTHAM GRAVEL CO., LTD., Lordsley Quarries, Willoughbridge, near Market Drayton, Salop. (Tel.: Pipe Gate 304/5.) All sizes crushed or natural washed gravel. Twice washed sharp concreting sand. Plastering sand. Plant capacity: 2,000 tons per day.

SOMERSET

ASHAM QUARRY CO., LTD., Chantry, Frome. (Tel.: Nunney 351.) All sizes limestone block, broken and aggregates. Tarred and bituminous macadam to B.S. Ex quarry and delivered.
DANGERFIELD, F. J., AND CO., LTD., 216A Finchley Road, London, N.W.3. (Tel.: HAMpstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)
GILSON, S. C., AND SONS, LTD., Holcombe, near Bath. (Tel.: Stratton-on-the-Fosse 243.)
HALL AND CO., LTD., Longmoor House, Ashton Vale Road, Bristol, 3. (Tel. 63001.) Gravel aggregates, concreting, plastering and building sand.
ROADS RECONSTRUCTION (1934), LTD., Stoneleigh House, Frome. (Tel.: Frome 2361.) All sizes broken limestone, dry and coated, to British Standards. Precast concrete products.
WAINWRIGHT, JOHN, AND CO. LTD., Shepton Mallet. (Tel.: Shepton Mallet 2366/7.) All sizes basalt, coated basalt, concrete aggregates, filtering media, building blocks and slabs.

SOUTH SCOTLAND

ESK MANUFACTURING CO., LTD., Carlisle. (Tel.: Carlisle 2-4941.) (For details see Cumberland.)

SOUTH WALES

IN-SITU CONCRETE, LTD., Victoria Works, Ebbw Vale (Tel. 3032), and Phoenix Works, Cardiff (Cardiff 63311), for limestone and slag aggregates, ready-mixed concrete, tarmacadam, media, filling, etc., kerbs and pavings.
PENMAENMAWR AND WELSH GRANITE CO., LTD., 18 Quay Street, Cardiff. (Tel.: 20646/7.) All sizes and gradings of crushed granite aggregate from our Cardiff and Swansea Dock Depots. Dolomite aggregates from Ewenny Quarry, Bridgend. (Tel. 1086/7.) Coated stone also available.
SESSIONS AND SONS, LTD., West Dock, Cardiff. Producers of coarse and fine aggregate, dredged and graded to British Standards. Branches Newport and Swansea. (Also Gloucester and Hereford.)
SOUTH WALES SAND AND GRAVEL CO., LTD., Head Office: P.O. Box 8, Beaufort Buildings, Swansea. (Tel.: Swansea 53071—5 lines.) Sand and gravel merchants, builders' merchants, Penmant Quarry owners, slag, hardcore, ashes, filling, graded clinker filter media. Depots: Cardiff, Newport, Barry, Port Talbot, Briton Ferry, Swansea, Llanelly.

STAFFORDSHIRE

BALLIDON QUARRIES, LTD., Ballidon, near Ashbourne, Derbyshire. (Tel.: Parwich 201 and 202.) Clean and graded dry limestone to B.S.S., all sizes, coated limestone to B.S. 802 and 1621 and wet-mix; large output; reliable deliveries.
BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: Norwood Hill 115.) (For dets., see Leics.)
CROXDEN GRAVEL, LTD., Cheadle, Stoke-on-Trent, Staffs. (Tel.: Tean 393.) Manchester Office: Blackfriars 3766/7. Plant capacity, 2,000 tons per day.
DUNNING AND SON, LTD., Wand End Gravel Pits, Hednesford. (Tel.: Hednesford 302/325.) Washed sand and gravel. All to B.S.S. High-quality roadstone, concrete aggregates and coated macadam from our Haughmond Quarry, near Shrewsbury. (See Shropshire.)
GRAVEL HILL SAND QUARRIES, LTD. Tel.: Ashby (Leics.) 79. (See Leicestershire for details.)
HARPER AND THOMAS, LTD., Bayston Hill Quarry, Shrewsbury. (See Shropshire for details.)
HILTON GRAVEL, LTD., Cheadle, Staffs. (Tel.: Tean 241.) Also at Longton, Stoke-on-Trent (Tel.: Longton 32196) and Stretton, Burton-on-Trent (Tel.: Burton 6061).
HULLAND GRAVEL CO., LTD., Cheadle, Stoke-on-Trent. (Tel.: Cheadle 2323/4, 2119 and 2195.) Manchester Office: Hardy's Buildings, 3 Cateaton Street, Manchester, 3. (Tel.: Blackfriars 2277/8.)

CONTRACTORS' GUIDE TO AGGREGATES

STAFFORDSHIRE

RUGELEY GRAVEL CO., LTD., Rugeley Quarries, Rugeley, Staffs. (Tel.: Rugeley 251/2.) Entirely modern plant. Sand classifiers. Finest aggregates to B.S.S. Large output.

SALISBURY AND WOOD, LTD., Matlock. (Tel. 272/273.) (For details, see Derbyshire.)

SHIRE OAK GRAVELS, LTD., Lichfield Road, Walsall Wood, Staffs. Washed crushed gravel and washed sand. (Tel.: Brownhills 3253.)

TERN HILL SAND AND GRAVEL CO., LTD., Almington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) Pit sand, concrete sand, and all grades of washed crushed gravel. Hardcore, clinkers, ashes and hoggin.

TRENTHAM GRAVEL CO., LTD., Lordsley Quarries, Willoughbridge, near Market Drayton, Salop. (Tel.: Pipe Gate 304/5.) All sizes crushed or natural washed gravel. Twice washed sharp concreting sand. Plastering sand. Plant capacity 2,000 tons per day.

WINDMILL SAND AND GRAVEL QUARRIES, LTD., Cannock Road, Wolverhampton. (Tel. 31108.) Concrete aggregates, plastering, building and asphalt sand. All to B.S.S.

SUFFOLK

ALRESFORD SAND AND BALLAST CO., LTD., Alresford Creek, near Chichester, Essex. (Tel.: Wivenhoe 341.) Suffolk area pits at Bures and Stoke-by-Nayland. All grades washed aggregate sand, also hoggin.

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: Norwood Hill 115.) (For dets., see Leics.)

DARBYS' SAND AND GRAVEL CO., LTD. Pit at Chippenham, Cambs. (See Cambs.)

DICKERSON, M., LTD., Teversham Corner, Newmarket Road, Cambridge. (Tel.: Cam. 56973/4.) (See Cambs.)

FRECKENHAM GRAVEL CO., LTD. Pit at Freckenham. (See Cambs.)

HALL AND CO., LTD., West End Road, Ipswich. (Tel.: Ipswich 55593/4.) Pits at Kesgrave and Homersfield, near Harleston. Gravel aggregates, concreting, plastering and building sand.

MACLAREN BROS. (KENNETT), LTD., Station Road, Kennett, Cambs. (Tel.: Kentford 333/4.) (See Cambs.)

ST. IVES SAND AND GRAVEL CO., LTD., 22 The Broadway, St. Ives, Hunts. (Tel.: St. Ives 2441/2/3/4.) (See Huntingdonshire for details.)

THORPE GRAVEL PITS, LTD., Harvey Lane, Norwich. (Tel.: Norwich 33243/4.) (See Norfolk.)

SURREY

COFF, HARRY A., LTD., Buckhurst Hill, Cheapside, Ascot, Berks. (Tel. 1026/7.) (See Berkshire.)

DANGERFIELD, F. J., AND CO., LTD., 261A Finchley Road, London, N.W.3. (Tel.: HAMpstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)

EASTWOOD SALES, LTD., Eastwood House, City Road, E.C.1. (Tel.: Clerkenwell 2040.) Longsdale Sand and Ballast Pit, Thorpe, near Egham. (Tel.: Egham 3121.) Producers and distributors of all grades of washed aggregates.

GILSON, S. C., AND SONS, LTD., Holcombe, near Bath. (Tel.: Stratton-on-the-Fosse 243.)

HALL AND CO., LTD., Victoria Wharf, Croydon. (Tel.: Croydon 4444.) Other main depots at Coulsdon, Epsom, Mitcham, Oxted, Purley, Redhill, Tadworth and Woking. Pits at Send and Reigate. Gravel aggregates, concreting, plastering and building sand, Surecrete precision-mixed concrete.

HARRIS, M. P., AND CO., LTD., Kingston Road, Leatherhead, Surrey. (Tel. 3497.) (See Sussex.)

JANES AND CO., LTD., 2C Buckingham Avenue, Slough. Sand, aggregates, hardcore, ashes, bulldozing & bulk excavation. (Tel.: Slough 20361/2/3.)

LONDON BALLAST CO., LTD. (Tel.: Paddington 5064.) 55A Porchester Terrace North, Paddington, W.2.

MARCO (AGGREGATES), LTD. Pit: Norlands Lane, Thorpe, near Egham. (Tel.: Chertsey 3401.) Producers and distributors of high-grade washed sand, shingle, ballast, etc.

MARCO (CROYDON), LTD., Hampton Road, West Croydon. (Tel.: THOrnton Heath 4236/7/8.) All building and road aggregates.

WELLS, A. L., AND SON, LTD., Builders' Merchants, Garlands Road, Leatherhead. (Tel. 3018/9.) Sand aggregates, hardcore, ashes, cement. Clinker block manufacturers.

SURREY

WINTON, WM. R., LTD., Send, Woking. (Tel.: Ripley 2454/5.) All grades sand, shingle, ballast, hoggin and ashes. Clinker block manufacturers.

SUSSEX

AVANN, F., Cavendish Avenue, Eastbourne. (Tel. 4969/70.) Washed and graded ballast, sand, bricks, breeze and concrete blocks, hardcore, clinker, tarmac, etc., supplied.

GILSON, S. C., AND SONS, LTD., Holcombe, near Bath. (Tel.: Stratton-on-the-Fosse 243.)

HALL AND CO., LTD., 16 Chapel Road, Worthing. (Tel.: Worthing 7840.) Other main depots at Bexhill, Bognor, Crowborough, East Grinstead, Eastbourne, Horsham, Hove and Seaford. Pits at Washington, Crumbles, near Eastbourne, Chichester, Rye Harbour, Midhurst, Shoreham and Portslade. Gravel aggregates, concreting, plastering and building sand, Surecrete precision-mixed concrete.

HARRIS, M. P., AND CO., LTD., West Station Goods Yard, Bexhill (Tel. 61); Cavendish Place, Eastbourne (Tel. 3800); Dominion Road, Worthing (Tel. 8822); Whitbread Lane, Northiam (Tel. 2211); Station Goods Yard, Haywards Heath (Tel. 1750); Crawley Road, Horsham (Tel. 3366); The Hornet, Chichester (Tel. 4181). All grades aggregates, hardcore, clinker, ashes, etc.

WRIGHT, C., AND SONS, (B'TON), LTD., 19 Bristol Gardens, Brighton, 7. (Tel.: Brighton 63357 and 62406.) All-in ballast, washed and crushed shingle, sand, ashes, hardcore, chalk, bricks, etc.

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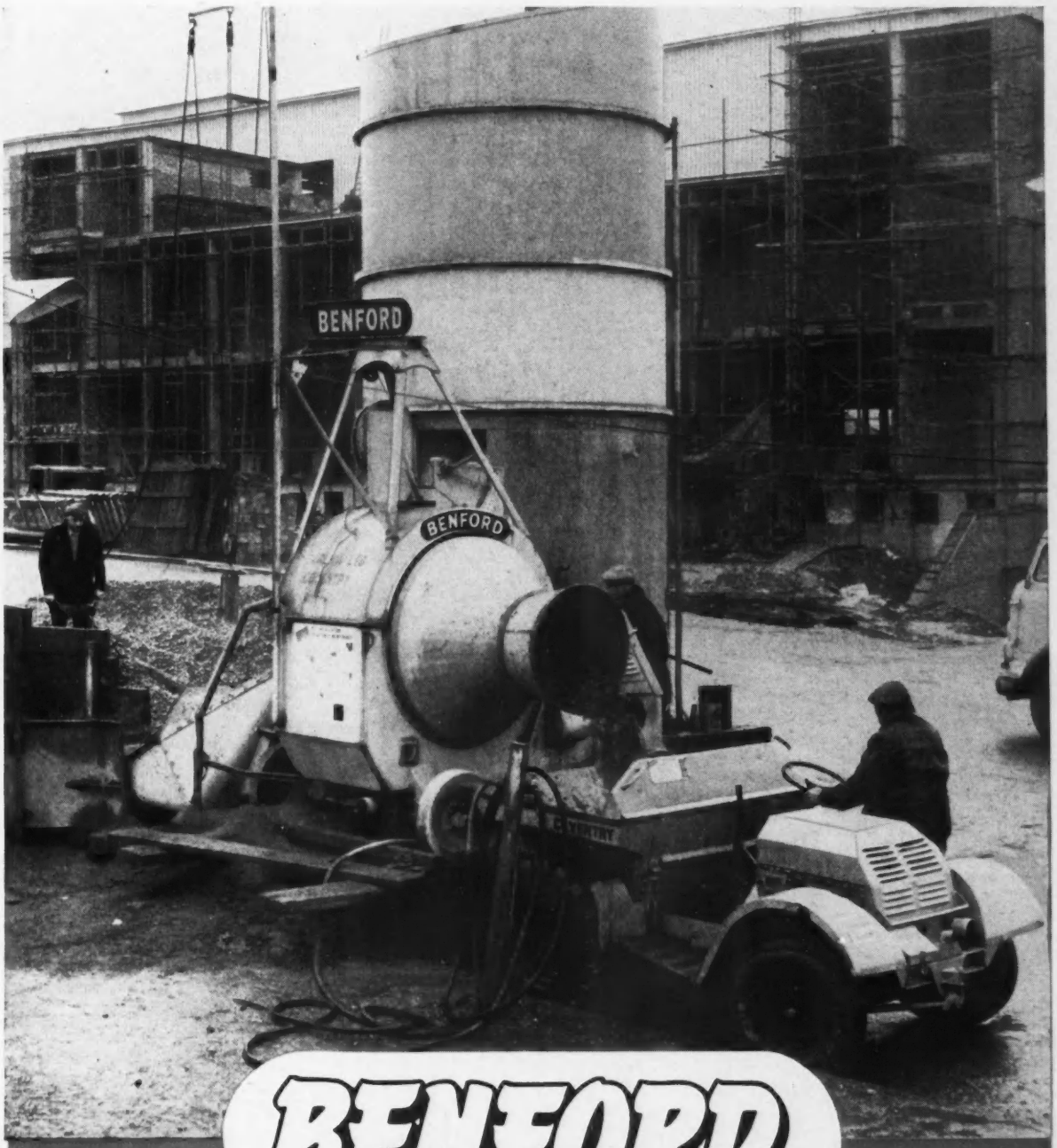

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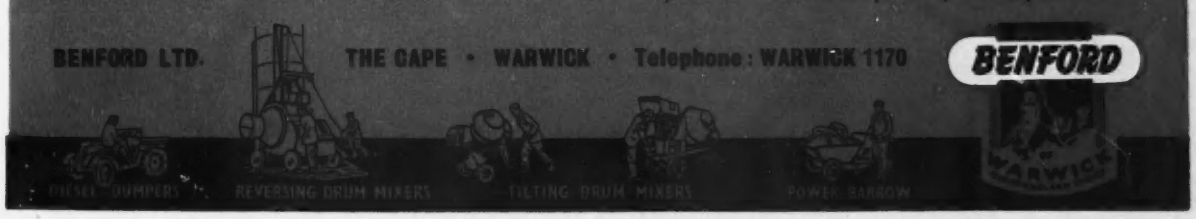

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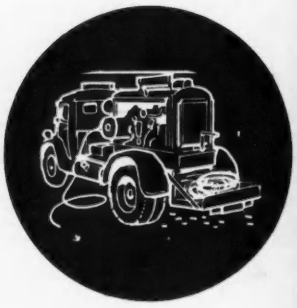

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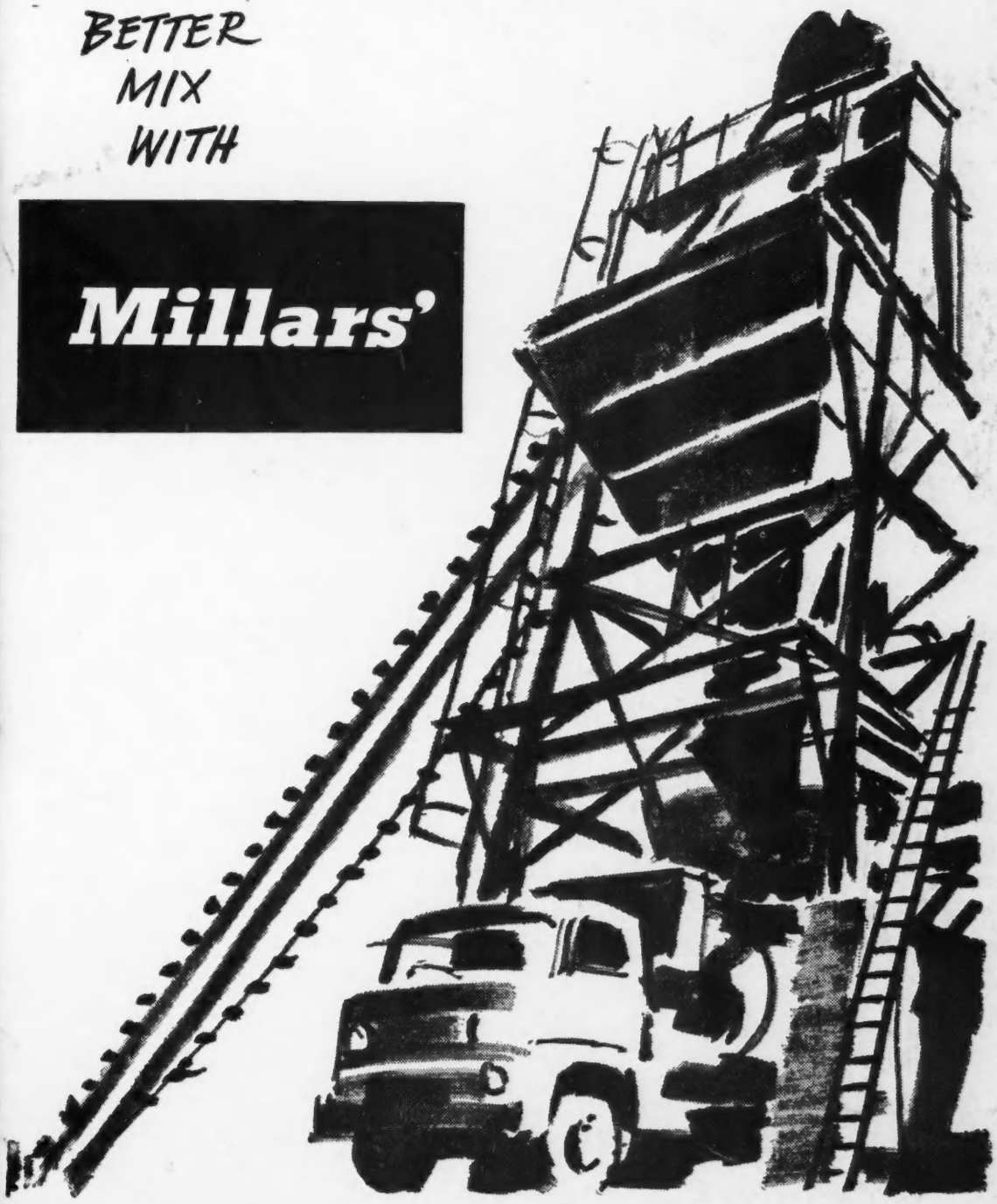

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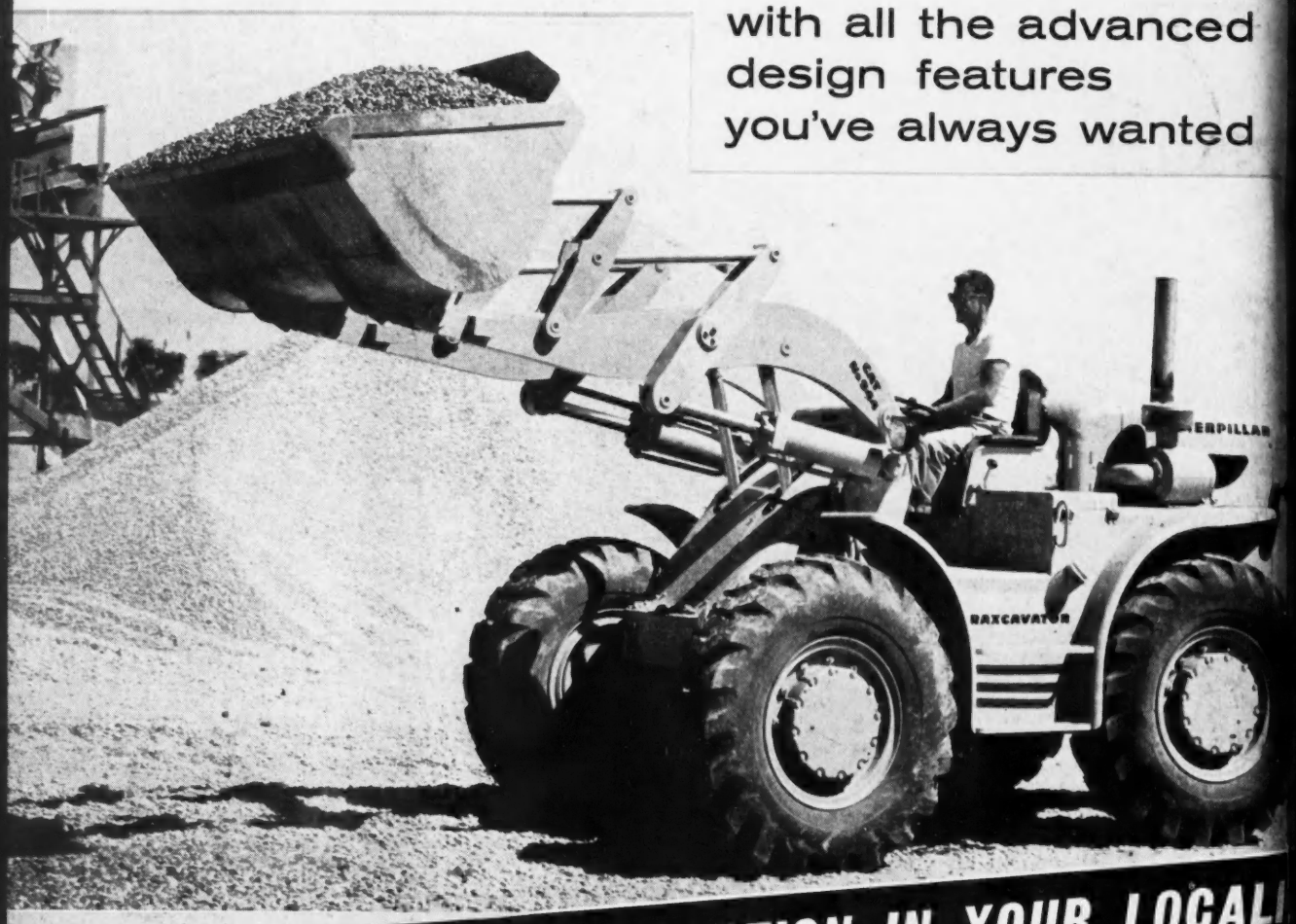

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